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ABSTRACT

This coursebook and textbook for a secondary/postsecondary level course in navigation rules comprise one of a number of military-developed curriculum packages selected for adaptation to vocational instruction and curriculum development in a civilian setting. The individualized, self-paced course discusses the international regulations for preventing collisions at sea and the Inland Navigational Rules Act of 1980. The coursebook first provides reading assignments and objectives. A test and answer key follow. The text provides the international and inland navigational rules so that they can be compared to each other. Where they differ, they are presented in separate columns. The left column is the international rule, the right column--the inland rule. When the rule is applicable to both inland and international water, it is presented across both columns. The areas covered in the text are general rules, steering and sailing rules, lights and shapes, sound and light signals, and exemptions. Annexes provide additional and special rules. (YLB)

MILITARY CURRICULUM MATERIALS

The military-developed curriculum materials in this course package were selected by the National Center for Research in Vocational Education Military Curriculum Project for dissemination to the six regional Curriculum Coordination Centers and other instructional materials agencies. The purpose of disseminating these courses was to make curriculum materials developed by the military more accessible to vocational educators in the civilian setting.

The course materials were acquired, evaluated by project staff and practitioners in the field, and prepared for dissemination. Materials which were specific to the military were deleted, copyrighted materials were either omitted or approval for their use was obtained. These course packages contain curriculum resource materials which can be adapted to support vocational instruction and curriculum development.

The National Center Mission Statement

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

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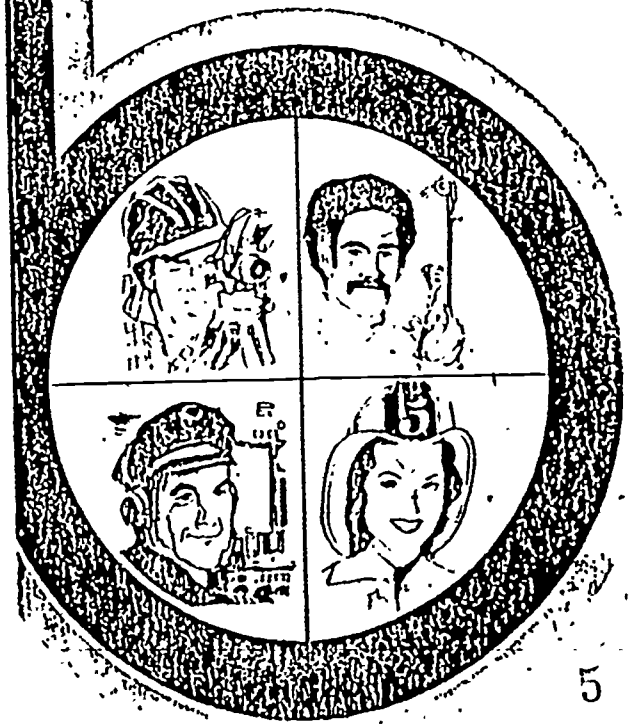
Military Curriculum Materials for Vocational and Technical Education

Information and Field Services Division

The National Center for Research in Vocational Education



Military Curriculum Materials Dissemination Is . . .

an activity to increase the accessibility of military developed curriculum materials to vocational and technical educators.

This project, funded by the U S. Office of Education, includes the identification and acquisition of curriculum materials in print form from the Coast Guard, Air Force, Army, Marine Corps and Navy.

Access to military curriculum materials is provided through a "Joint Memorandum of Understanding" between the U.S Office of Education and the Department of Defense.

The acquired materials are reviewed by staff and subject matter specialists, and courses deemed applicable to vocational and technical education are selected for dissemination.

The National Center for Research in Vocational Education is the U S Office of Education's designated representative to acquire the materials and conduct the project activities

Project Staff:

Wesley E. Budke, Ph D., Director
National Center Clearinghouse

Shirley A. Chase, Ph.D.
Project Director

What Materials Are Available?

One hundred twenty courses on microfiche (thirteen in paper form) and descriptions of each have been provided to the vocational Curriculum Coordination Centers and other instructional materials agencies for dissemination.

Course materials include programmed instruction, curriculum outlines, instructor guides, student workbooks and technical manuals.

The 120 courses represent the following sixteen vocational subject areas:

- Agriculture
- Aviation
- Building & Construction Trades
- Clerical
- Occupations
- Communications
- Drafting
- Electronics
- Engine Mechanics
- Food Service
- Health
- Heating & Air Conditioning
- Machine Shop
- Management & Supervision
- Meteorology & Navigation
- Photography
- Public Service

The number of courses and the subject areas represented will expand as additional materials with application to vocational and technical education are identified and selected for dissemination.

How Can These Materials Be Obtained?

Contact the Curriculum Coordination Center in your region for information on obtaining materials (e.g., availability and cost). They will respond to your request directly or refer you to an instructional materials agency closer to you.

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DECKWATCH OFFICER NAVIGATION RULES 15-5

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Deckwatch Officer Navigation Rules DWONR-0631 Correspondence Course 15-5

Developed by:
United States Coast Guard

Occupational Area:
Meteorology, Navigation, and Maritime Occupations

Development and Review Dates:
2/82

Print Pages:
146

Availability: The National Center for Research in Vocational Education; ERIC

Suggested Background:
NONE

Target Audiences:
Grade 11 - Adult

Organization of Materials:
Student workbook with objectives, assignments, tests and answers.

Type of Instruction:
Individualized, self-paced

Type of Materials:	No. of Pages:	Average Completion Time:
Student Workbook	145	Flexible

Supplementary Materials Required:
NONE

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Course Description:

This course discusses the International Regulations for preventing collisions at sea (1972 COLREGS) and the Inland Navigational Rules Act of 1980. The rules are presented so that they can be compared to each other. Where the International and Inland Rules differ, they are presented in separate columns. The left column is always the International Rules. The right column is the Inland Rule. When the rule is applicable to both Inland and International waters, it is presented across both columns.

The first pamphlet is the course book that gives the reading assignments followed by the test and answers. The second pamphlet is the text for the reading assignments. The areas covered are: General Rules; Steering and Sailing Rules; Lights and Shapes; Sound and Light Signals; and Exemptions.

COURSE BOOK FOR DECK WATCH OFFICER NAVIGATION RULES

U.S. DEPARTMENT OF TRANSPORTATION
U. S. Coast Guard (06/82)

U. S. Coast Guard Institute
PAMPHLET NO. M06311

DECK WATCH OFFICER

First Edition: December 1981
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U. S. Coast Guard Institute
Deck Branch
P. O. Substation 18
Oklahoma City, OK 73169

FTS: 749-4388

QUESTIONS ABOUT THIS TEXT SHOULD BE ADDRESSED TO THE SUBJECT MATTER SPECIALIST FOR THE QUARTERMASTER RATING.

INTRODUCTION

As you proceed through this self-paced course in NAVIGATION RULES you should understand that YOU are the student and the scorekeeper. Your success in a course of this type depends entirely upon YOU and your determination to achieve.

How often are you going to study? How much time will you spend per study period? What approach are you going to use when studying in order to "get the most out of it"? Are you going to outline, take notes, or underline and use marginal notes? These are all things you need to consider, and then decide which methods best suit YOU.

IMPORTANT NOTE: This text has been compiled for TRAINING ONLY. It should NOT be used in place of official directives or publications. The text information is current according to the references listed. You should, however, remember that it is YOUR responsibility to keep up with the latest professional information available for your rating. Current information is available in the Coast Guard Enlisted Qualifications Manual COMDTINST M1414.8 (old CG- 11).

Each assignment is divided into three parts:

Reading assignment and objectives.

Reading material in Pamphlet 006311.

Self-quiz with answers and references.

NAVIGATION RULES GENERAL

Reading Assignment: 1
Pages 1 through 5 of the text.

OBJECTIVES

To successfully complete this assignment, you must study the text and master the following objectives:

1. State where and to whom the International Regulations for Preventing Collisions at Sea (1972 COLREGS) and the Inland Navigation Rules Act of 1980 apply.
2. Identify which vessels are exempt from full adherence to the regulations.
3. Cite the situations and/or circumstances under the responsibility rule (Rule 2) in which a conning officer of a vessel may depart from adherence to the 1972 COLREGS and Inland Navigational Rules Act of 1980.
4. Memorize the general definitions found in Rule 3 of the 1972 COLREGS and the Inland Navigational Rules Act of 1980.

1. The 72 COLREGS apply to all vessels upon the high seas and _____.

   A. connecting waters navigable by seagoing vessels
   B. waterways under the control of the U.S. Corps of Engineers
   C. specific inland lakes near coastal shipping lanes
   D. rivers, tributaries, and harbors of member countries only

2. All of the following vessels are allowed to display special lights on the HIGH SEAS as approved by their governments EXCEPT _____.

   A. naval vessels engaged in maneuvers
   B. vessels sailing in a convoy
   C. seaplanes on the water
   D. vessels engaged in fishing in a fleet

3. All of the following are practices of good seamanship EXCEPT _____.

   A. in a meeting situation, altering course to the left to increase sea room
   B. maintaining an alert radar watch in reduced visibility
   C. showing a flare-up light to attract attention when you are not under command
   D. maintaining a proper lookout from sunrise to sunset

4. In what situation may a conning officer depart from strict compliance with the 1972 COLREGS?

   A. When a state of hostilities exists between any two of the member countries.
   B. In an instance where total observance of the rules would relieve him of responsibility.
   C. Under an unfavorable condition generated through a stopping or backing maneuver.
   D. In a circumstance where adherence to the rules would not be adequate to prevent a collision.

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5. What is a power driven vessel?

A. Every vessel underway.
B. Every vessel propelled by the power of the wind.
C. Every vessel that has the power to give way to the other vessel.
D. Every vessel propelled by machinery.

6. A sailboat with an auxiliary engine:

I. If under power is considered a power-driven vessel.
II. If under sail and power is considered a sailing vessel.

A. I only
B. II only
C. I and II
D. Neither I nor II

7. The determining factor that qualifies a vessel under sail as a "sailing vessel" is whether or not the vessel is _____.

A. able to maneuver
B. using propelling machinery
C. in sight of another vessel
D. displaying proper lights or shapes

8. According to International Rules, all of the following are engaged in fishing EXCEPT a vessel _____.

A. setting nets
B. engaged in trawling
C. using a dredge net
D. engaged in trolling

9. What is the meaning of the term "NOT UNDER COMMAND"?

A. No commanding officer aboard.
B. Underway with no way on.
C. Unable to maneuver as required by the rules.
D. Underway with way on.

10. Which vessel is NOT restricted in its ability to maneuver?

A. A vessel engaged in laying cable.
B. A vessel engaged in surveying.
C. A vessel fishing with trolling lines.
D. A vessel fishing with nets.

11. Which vessel is NOT restricted in her ability to maneuver?

A. A vessel engaged in servicing a navigation marker.
B. A pilot vessel enroute to station.
C. Two vessels underway transferring cargo.
D. A vessel engaged in dredging.

12. What term applies to any vessel that is neither at anchor, fast to shore, nor aground?

A. Afloat
B. Waterborne
C. Underway
D. Adrift

13. A sailing vessel is NOT underway within the meaning of the rules when the vessel is _____.

A. becalmed
B. in irons
C. aground
D. all of the above

14. Which vessel(s) is/are underway?

I. A sailing vessel that is becalmed.
II. A vessel tied to another vessel which is moored to a pier.

A. I only
B. I and II
C. II only
D. Neither I nor II

15. When is a vessel considered underway?

A. When made fast to the shore.
B. When at anchor.
C. When not making way.
D. When aground.

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16. When is a vessel considered to be underway?

I. When drifting with the current.
II. When dragging anchor under foot.

A. I only
B. II only
C. Both I and II
D. Neither I nor II

17. International Rules of the Road defines the length of a vessel in terms of _____.

A. its overall length (LOA).
B. length stated on its certificate of registry (LOR).
C. its length along the waterline (LWL).
D. the length between prependiculars (LBP).

18. Under International Rules, breadth of a vessel is defined as the _____.

A. breadth measured at the transverse center line
B. registered breadth
C. greatest breadth
D. breadth measured across the weather deck, amidships

19. According to the rules, vessels are in sight of one another when _____.

A. detected on radar
B. one can be seen visually from the other
C. fog signals are heard in restricted visibility
D. plotted on the maneuvering board

LESSON 1
ANSWERS

QUESTION	ANSWER	PAGE
1	A	1
2	C	1
3	A	2
4	D	2
5	D	3
6	A	3
7	B	3
8	D	3
9	C	3
10	C	3
11	B	3
12	C	4
13	C	4
14	A	4
15	C	4
16	C	4
17	A	4
18	C	4
19	B	4

STEERING AND SAILING RULES

Conduct of Vessels in any Condition of Visibility

Reading Assignment: 2
Pages 7 through 14 of the text.

OBJECTIVES

To successfully complete this assignment, you must study the text and master the following objectives:

1. State the steering and sailing rule as it applies to proper lookouts.
2. List the factors used to determine the safe speed for a vessel.
3. Explain what a steady true compass bearing and a changing true compass bearing indicate about the risk of collision.
4. Describe the actions that must be taken to avoid collision.
5. Describe the provisions of the rule pertaining to narrow channels.
6. List the specific guidelines of Rule 10 concerning traffic separation schemes.

1. The conning officer is required to maintain a proper lookout in accordance with the _____.

   A. Steering and Sailing Rules
   B. Pilot Rules for Inland Waters
   C. Rule of Responsibility
   D. Rule of Good Seamanship

2. A conning officer should determine that a safe speed should be NO greater than that at which he can _____.

   A. maneuver effectively while maintaining collision bearings on other shipping in the area
   B. bring his vessel to a complete stop within the current range of visibility
   C. detect and avoid all shipping he might encounter
   D. alter circumstances to increase the safety margin of the situation

3. One factor that every conning officer must consider when he is determining a vessel's safe speed is the _____.

   A. mission of the vessel
   B. state of visibility
   C. availability of lookouts
   D. positioning of lookouts

4. To determine a safe speed, all of the following factors are mentioned by the rules EXCEPT _____.

   A. the presence of background light at night
   B. the draft, in relation to the available depth of water
   C. the competency of the crew
   D. constraints imposed by the radar range scale in use

5. When navigating in reduced visibility with the aid of radar, which of the following are contained as factors included in determining safe speed?

I. The possibility that small vessels, ice, and other floating objects may not be detected by radar at an adequate range.

II. The more exact assessment of the visibility that may be possible when radar is used to determine the range of vessels or other objects in the vicinity.

A. I only
B. II only
C. I and II
D. Neither I nor II

6. When navigating in reduced visibility with the aid of radar, which of the following statements is/are correct?

I. The possibility exists that small vessels, ice, and other floating objects may not be detected by radar at an adequate range.

II. Information from radar can be used to determine safe speed.

A. I only
B. II only
C. I and II
D. Neither I nor II

7. Which of the following is true when navigating with radar during restricted visibility?

I. Radar may not indicate small vessels and ice.

II. Radar may mean that safe speed is even slower due to the indication of other vessels on the scope.

A. I only
B. II only
C. I and II
D. Neither I nor II

8. Your ship is on a course of 090°T. You observe several ships in the area. After plotting the course and speed of the ships, you discover the bearings are all constant. Which ship is NOT in danger of colliding with you if you maintain course and speed?

A. Ship A bearing 080°T, course 180°T
B. Ship B bearing 100°T, course 350°T
C. Ship C bearing 090°T, course 270°T
D. Ship D bearing 180°T, course 090°T

9. If the bearing of an approaching vessel does not change appreciably, the vessel is _____.

A. the give-way vessel
B. the stand-on vessel
C. on a danger bearing
D. on a collision course

10. Risk of collision exists when an approaching vessel has a/an _____.

A. generally steady bearing and decreasing range
B. generally steady range and increasing bearing
C. increasing range and bearing
D. decreasing range and bearing

11. Which of the following is/are correct in determining risk of collision?

I. Carefully observe the compass bearing of an approaching vessel.

II. A C.P.A. of less than one mile.

A. I only
B. II only
C. Both I and II
D. Neither I nor II

12. Although you detect a noticeable bearing change, the risk of collision may still exist when you approach a vessel _____.

A. in a head to head situation
B. at close range
C. in an overtaking situation
D. at long range

13. The THREE elements of any action a conning officer takes to avoid a collision should be (1) positive, (2) made in ample time, and (3) conducted with _____.

A. an alternate emergency plan in reserve
B. due regard to the observance of good seamanship
C. a reduction of risk as the primary criteria of the maneuver
D. the assistance of all electronic aids available

14. You are in charge of the navigation of a power-driven vessel. On your port bow you sight another vessel proceeding in such a direction as to involve risk of collision, and it is showing lights as indicated below. Which of the following statements is/are correct?

W
R
R W
R

I. You would keep course and speed until it becomes apparent that the other vessel is not taking action to avoid collision.

II. You would take early and substantial action to avoid collision.

A. I only
B. II only
C. I and II
D. Neither I nor II

15. The following are considered practices of good seamanship which are not specifically required by the rules with the EXCEPTION of _____.

A. doubling the lookout in restricted visibility
B. taking positive action in ample time to avoid a collision
C. steering by hand in congested waters
D. master conning in close quarters

16. Any change in course and/or speed made for the purpose of avoiding a collision must be, if possible _____.

A. accompanied by an intentional sound signal
B. acknowledged prior to commencing the maneuver
C. simultaneous with all vessels involved
D. large enough to be apparent to another vessel

17. When acting on radar information, what must you take into account when making a course change?

I. Any alteration must be small.

II. Any alteration must be made in good time.

A. I only
B. II only
C. I and II
D. Neither I nor II

18. Which of the following should be observed when making an alteration of speed to avoid close quarters in reduced visibility?

A. There is sufficient sea room.
B. That there are no vessels astern.
C. That it is large enough to be readily apparent.
D. That the other vessel maintains its course and speed.

19. The rules state that when there is an alteration of course to avoid collision, it should be all of the following EXCEPT _____.

A. made in good time
B. made with enough sea room
C. made so it does not involve a close quarters situation
D. made to the left

20. Provided there is sufficient sea room, it is made in good time, is substantial and does not result in another close quarters situation, which of the following may be the most effective action to avoid a close quarters situation, according to the rules?

I. Take all way off the vessel.

II. An alteration of course.

A. I only
B. II only
C. I and II
D. Neither I nor II

21. When using an alteration of course alone to avoid a close quarters situation, the watch officer must make sure of all of the following EXCEPT that _____.

A. there is sufficient sea room for the maneuver
B. the action does not result in a close quarters situation with other vessels
C. his vessel does not cross ahead of the other vessel
D. the alteration is made in good time

22. Two power driven vessels are crossing so as to involve risk of collision. Which of the following statements is/are correct?

I. The stand-on vessel is not allowed to take action until the situation reaches the "in extremis" situation.

II. The effectiveness of action taken by a give way vessel shall be carefully checked until the other vessel is past and clear.

A. I only
B. II only
C. I and II
D. Neither I nor II

23. Vessel "A" is on a course 000°T. Vessel "B" is on a reciprocal course and is bearing 355°T range 2000 yards from vessel "A." To ensure a safe passing you should _____.

A. maintain course and speed
B. alter course to port
C. alter course to ensure a starboard-to starboard passing
D. maneuver to ensure a port-to-port passing

24. When you have taken action to avoid collision with another vessel, the effectiveness of the action should be checked, according to the rules, until _____.

A. the other vessel draws abaft your beam
B. the range to the other vessel is positively increasing
C. the other vessel is past and clear
D. radar plots show you to be past C.P.A.

25. According to the rules, a vessel proceeding along the course of a narrow channel or fairway shall:

I. Keep as near the outer limit which lies on her starboard side as is safe and practicable.

II. Keep to that side of the fairway or mid-channel which lies to the starboard side of such vessel.

A. I only
B. II only
C. I and II
D. Neither I nor II

26. In a narrow channel a power-driven vessel must, whenever it is safe and practicable, _____ of the channel.

A. stay in the middle
B. keep to the left side
C. keep to the right side
D. keep to the windward side

27. A sailing vessel is prohibited from crossing a narrow channel if the act of crossing _____.

A. impedes the progress of a vessel restricted to the boundaries of the channel
B. is for the sole purpose of using the wind to maintain headway
C. hinders the navigation of smaller vessels capable of greater maneuverability
D. restricts the visibility of oncoming traffic

28. According to the Steering and Sailing Rules, fishing vessels actively engaged in fishing in narrow channels are prohibited from _____.

A. conducting operations during peak traffic hours
B. fishing in the inbound lane while outbound
C. closing and passing other vessels except those drifting or at anchor
D. obstructing passage of any other vessel navigating the channel

29. According to International Rules which procedure is NOT in agreement with the traffic separation schemes?

A. Proceed in the appropriate traffic lane in the general direction of traffic flow for that lane.
B. Join or leave a traffic lane at the termination of the lane.
C. Keep as close to the traffic separation line as possible at all times.
D. Cross traffic lanes at right angles when lanes must be crossed.

30. Rules concerning traffic separation schemes in international waters apply to _____.

A. traffic schemes adopted by IMCO
B. traffic schemes adopted by local authority
C. traffic schemes shown on a chart
D. all of the above

31. In international waters, a vessel shall not _____.

A. enter a traffic separation zone in an emergency
B. cross a traffic lane
C. engage in fishing in the separation zone
D. proceed in an inappropriate traffic lane

32. When joining or leaving a traffic separation scheme in international waters, you must _____.

A. signal your intentions well in advance of the maneuver
B. enter or exit at as small an angle to the traffic flow as is practicable
C. be prepared to remain in the traffic flow to the termination of the lane
D. use only the separation zone for overtaking and passing slower vessels

33. In international waters a vessel joining or leaving a traffic separation lane from the side shall do so at:

I. As small an angle to the general direction of traffic flow as practicable.

II. Nearly as practicable at right angles to the general direction to traffic flow.

A. I only
B. II only
C. I and II
D. Neither I nor II

34. The procedure you should follow in crossing the lanes of a traffic separation scheme in international waters, is to cross _____.

A. at right angles to the general direction of traffic flow
B. by joining traffic flow to either termination point and returning in the opposite lane
C. as quickly as possible at the nearest charted crosslane to your position
D. astern of the traffic on the near lane and ahead of traffic on the far lane

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35. According to International Rules a vessel intending to cross a traffic lane should _____.

A. not do so under any circumstances
B. cross at as small an angle to the general direction flow as practicable
C. cross nearly as practicable at right angles
D. cross at an approximately 45 degree angle, favoring the direction of traffic flow

36. In an international traffic separation scheme, fishing vessels are _____.

A. prohibited from engaging in fishing within the scheme
B. permitted to engage in fishing, but not so as to impede passage
C. permitted to engage in fishing, but within a separation zone only
D. permitted to engage in fishing, but within inshore traffic zones only

37. Your vessel is in an international traffic separation scheme proceeding in a direction with the general flow of traffic. Under these circumstances, which reasons for entering the separation zone would be proper?

I. To pass a vessel proceeding in the same direction.

II. In cases of emergency to avoid immediate danger.

A. I only
B. II only
C. I and II
D. Neither I nor II

38. A vessel using an international traffic separation scheme shall comply with all of the following EXCEPT _____.

A. proceed in the appropriate traffic lane
B. join traffic lanes at as small an angle as is practicable
C. if anchoring is necessary, anchor in the separation zone
D. so far as practicable, avoid crossing traffic lanes

39. A vessel using an international traffic separation scheme shall _____.

A. only anchor in the separation zone
B. if obliged to cross a traffic lane, do so at as small an angle as is practicable
C. avoid anchoring in areas near the termination of the scheme
D. utilize the separation zone for navigation through the scheme if it is impeding other traffic due to its slower speed

40. A vessel NOT using an international traffic spearation scheme:

I. Shall avoid it by as wide a margin as possible.

II. May run parallel in close proximity, being careful not to crowd into or enter the scheme.

A. I only
B. II only
C. I and II
D. Neither I nor II

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LESSON 2
ANSWERS

QUESTION	ANSWER	PAGE
1	A	7
2	C	7, 8
3	B	7
4	C	7, 8
5	C	8
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10	A	9
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22	B	9, 10
23	D	10
24	C	10
25	A	11

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QUESTION	ANSWER	PAGE
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27	A	11
28	D	11
29	C	12
30	A	12
31	D	12
32	B	12
33	A	12
34	A	12
35	C	12
36	B	12
37	B	12
38	C	12
39	C	12
40	A	12

STEERING AND SAILING RULES

Conduct of Vessels in Sight of One Another

Reading Assignment: 3
Pages 15 through 19 of the text.

OBJECTIVES

To successfully complete this assignment, you must study the text and master the following objectives:

1. Cite the rule governing sailing vessels in sight of and approaching one another relative to the risk of collision.
2. Identify which vessel is responsibile for safe passing in all overtaking situations.
3. Describe the criteria used for determining an overtaking situation.
4. Explain the rule pertaining to vessels in a head-on situation.
5. Explain the rule pertaining to vessels in a crossing situation.
6. Describe the actions required of the designated give-way vessel.
7. Describe the actions required of the designated stand-on vessel.
8. List the responsibilites of and between power-driven vessels, sailing vessels, and fishing vessels while underway.

1. Which of the following is correct for the situation below?

A. Vessel I must yield to II because she has the wind on her port side.
B. Vessel II must yield to I because she has has the wind on her starboard side.
C. The rule of special circumstances applies because of conflicting rules.
D. It is a meeting situation so vessel II must yield.

2. Two sailing vessels are approaching each other as shown below.

I. Vessel A is the stand-on vessel.

II. Vessel B is on the port tack.

A. I only
B. II only
C. I and II
D. Neither I nor II

3. Which of the following statements is correct?

I. II should alter course to starboard.

II. II is the stand-on vessel.

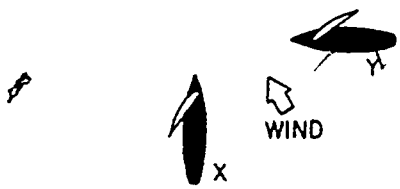
A. I only
B. II only
C. I and II
D. Neither I nor II

4. In the diagram shown below the two sailing vessels are approaching each other so as to involve risk of collision. The wind is coming from the direction shown by the arrow. Which of the following statements is/are correct?

I. Vessel X is on the port tack.

II. Vessel X must keep out of the way of vessel Y.

A. I only
B. II only
C. I and II
D. Neither I nor II



5. When two sailing vessels are approaching one another so as to involve the risk of collision, the vessel which has the wind on the port side should _____ vessel.

A. keep out of the way of the other
B. assume the duties of the stand-on
C. signal her course and speed to the other
D. maneuver to pass ahead of the other

6. A vessel is in an overtaking situation if she bears _____ relative from you.

A. 255°
B. 135°
C. 095°
D. 035°

7. A vessel approaching your vessel from 235° relative is in a/an _____ situation.

A. meeting
B. crossing
C. overtaking
D. passing

8. With respect to sailing vessels, which of the following statements are true?

A. A sailing vessel overtaking is burdened.
B. When seeing another sailing vessel to leeward and you could not determine its direction, hold course and speed.
C. A sailing vessel on the starboard tack shall keep out of the way of other sailing vessels.
D. All of the above.

9. Which statement(s) correctly defines the overtaking situation?

I. You are running on a parallel or nearly parallel course at a greater speed than the other vessel.

II. You are coming up on another vessel more than two points (22.5°) abaft her beam.

A. I only
B. II only
C. I and II
D. Neither I nor II

10. At night in an overtaking situation, an overtaking vessel should see only the overtaken vessel's _____.

A. sidelights
B. masthead light
C. stern light
D. range light

11. Your vessel is considered to be overtaking when _____.

A. you have another ahead on radar with a slow closing rate
B. you are approaching another vessel from a direction abaft the other vessel's beam
C. you are in doubt as to whether you are overtaking or crossing
D. none of the above

12. The overtaking vessel in all overtaking situations is responsible for ensuring a/an _____.

A. safe passing
B. understanding of signals
C. maneuvering area for the overtaken vessel
D. clear channel prior to the passing

13. Two vessels are approaching each other nearly end on. What action should be taken to avoid collision?

A. The first vessel to sight the other should give-way.
B. The vessel making the slower speed should give-way.
C. Both vessels should alter course to starboard.
D. Both vessels should alter course to port.

14. Two power-driven vessels are on courses that create the possibility of their colliding. In which situation, if any, are both vessels the give-way vessel?

A. Meeting
B. Overtaking
C. Crossing
D. None. Only one vessel can be the give-way vessel in any circumstance.

15. In a meeting situation, a starboard to starboard passage is _____.

A. acceptable when vessels are in radio communication and agree
B. acceptable provided the proper signals are given
C. unacceptable and specifically forbidden by the International Rules
D. not mentioned in the International Rules

16. When a conning officer is in doubt about the possibility of a head-on situation, he should _____.

A. stop the movement of his vessel until the situation is clear
B. undertake the duties/responsibilities of the give way vessel
C. slow the motion of his vessel and await the intentions of the other vessel
D. assume such a situation does exist and act accordingly

17. If two power-driven vessels are crossing and a collision is possible, what vessel should give-way to avoid the risk of collision?

A. Smaller vessel
B. Larger vessel
C. Vessel to starboard
D. Vessel to port

21

18. The vessel that is obliged by the rules to hold her course and speed in a crossing situation is the:

I. Give-way vessel

II. Vessel having the other on her starboard hand.

A. I only
B. II only
C. I and II
D. Neither I nor II

19. In a crossing situation the stand-on vessel must normally _____.

A. take action to ensure an easy passage
B. take action to pass astern of the give-way vessel
C. maintain course and speed
D. maintain course and increase speed

20. You are in charge of the navigation of a power-driven vessel. On your bow you sight another power-driven vessel proceeding in such a direction as to involve risk of collision, and it is showing the lights indicated below. Which of the following statements is correct?

W

W

G

I. You must keep course and speed until it becomes apparent that the other vessel is not taking action to avoid collision.

II. You may take action to avoid collision by your action alone at any time during the approach of this vessel.

A. I only
B. II only
C. I and II
D. Neither I nor II

21. The vessel that has the other vessel to starboard is called the _____ vessel.

A. give-way
B. stand-on
C. burdened
D. privileged

22. You are in charge of the give-way, power-driven vessel in a crossing situation. The rules require you NOT to do which of the following:

A. Check on the effectiveness of the avoiding action.
B. Take early and substantial action to keep well clear.
C. Alter course to port.
D. If necessary, slacken speed or take all way off.

23. In International Rules the give-way vessel must _____.

A. alter to starboard
B. go under the other vessel's stern
C. take positive action in ample time
D. slacken speed, stop, or reverse

24. The vessel that has the other vessel to port is called the _____ vessel.

A. give-way
B. stand-on
C. burdened
D. privileged

25. Every vessel that is directed by the rules to keep out of the way of another vessel must take positive action early to comply with this obligation and must _____.

A. avoid crossing ahead of the other vessel
B. avoid passing astern of the other vessel
C. sound one prolonged blast to indicate compliance
D. alter course to port for a vessel on her port side

26. In a situation where the GIVE-WAY vessel is to keep out of the way, the STAND-ON vessel should _____.

A. acknowledge the actions of the GIVE-WAY vessel
B. conduct any initial maneuver to avoid a collision
C. maintain her course and speed
D. provide mutual responsibility between vessels

27. You have a sailing vessel under sail and power approaching off your port bow. You should _____

A. come left and pass astern
B. stop your engines
C. come right and pass well clear ahead
D. hold your course and speed

28. In international waters, on your port bow, you observe the green light of a vessel. You have sounded the danger signal. When may you take avoiding action?

A. When the vessel is 1/2 mile off.
B. Anytime.
C. When it is apparent the other vessel is not taking appropriate action to avoid collision.
D. When the vessel is 2 miles off.

29. In the crossing situation, the stand-on power-driven vessel may take action to avoid collision by her maneuver alone when:

I. As soon as it is apparent that the give-way vessel is not taking appropriate action.

II. As soon as it can see a crossing power-driven vessel on the port bow.

A. I only
B. II only
C. I and II
D. Neither I nor II

30. In the initial stage of a crossing situation, the stand-on vessel is _____.

A. expected to stop her engines, but maintain course
B. required to maintain course and speed
C. required to answer the give-way vessel's maneuvering signal
D. allowed to take action to avoid collision

31. You are the stand-on vessel in a crossing situation; you observe another vessel's bearings and feel it has not taken sufficient action to avoid collision. You sound the danger signal. When is the earliest time you can take added action?

A. Immediately upon sounding the danger signal.
B. At 1/2 miles.
C. When collision cannot be avoided by the give-way vessel alone.
D. At no time. You must maintain course and speed.

32. In the crossing situation, for the stand-on power-driven vessel, which of the following statements is correct?

I. Keep course and speed until the situation is in extremis.
II. Take action to avoid collision by its maneuver alone when it becomes apparent that the give-way vessel is not taking action.

A. I only
B. II only
C. Both I and II
D. Neither I nor II

33. In maneuvering in compliance with these rules, a stand-on vessel:

I. May alter course when it becomes apparent that the give-way vessel is not taking action.
II. Must alter course when the situation reaches "In extremis."

A. I only
B. II only
C. I and II
D. Neither I nor II

34. In a crossing situation, if it becomes apparent that the give-way vessel is not taking appropriate action, the stand-on vessel is _____.

A. required to take action to avoid collision
B. required to sound the danger signal and is required to maintain course and speed to avoid collision
C. required to sound the danger signal and is allowed to take action to avoid collision
D. allowed to sound the danger signal and is required to take action to avoid collision

35. In the third stage of a crossing situation, the stand-on vessel is _____.

A. required to maintain course and speed in order to avoid blame in a maritime court settlement
B. required to take action to avoid collision (maneuvering signals are not required)
C. required to take action to avoid collision (maneuvering signals are required)
D. allowed to take action (maneuvering signals are required)

36. In clear visibility, all of the following vessels are give-way except a _____.

A. fishing vessel overtaking a power-driven vessel
B. sailing vessel meeting a fishing vessel
C. vessel laying cable meeting a fishing vessel
D. fishing vessel meeting a minesweeper

37. With certain exceptions, power-driven vessels underway should keep out of the way of vessels that are _____.

A. approaching from astern
B. crossing from port to starboard
C. engaged in fishing
D. closing from either quarter

38. A sailing vessel is NOT required to keep out of the way of a _____.

A. power-driven vessel
B. vessel not under command
C. vessel restricted in her ability to maneuver
D. vessel engaged in fishing

39. Fishing vessels shall keep out of the way of all of the following vessels except a _____.

A. sail vessel
B. vessel not under command
C. vessel constrained by her draft
D. vessel engaged in towing

40. When a vessel engaged in fishing meets a vessel restricted in its ability to maneuver, which vessel has the right of way?

A. The fishing vessel.
B. The vessel restricted in its ability to maneuver.
C. Neither vessel, as this comes under the rule of special circumstances.
D. Both vessels.

41. A vessel engaged in fishing when underway shall keep out of the way of:

I. A vessel not under command.

II. A vessel engaged in surveying.

A. I only
B. II only
C. I and II
D. Neither I nor II

42. A vessel constrained by her draft shall keep out of the way of:

I. A vessel launching aircraft.

II. A vessel engaged in surveying.

A. I only
B. II only
C. I and II
D. Neither I nor II

43. A power-driven vessel engaged in fishing by trawling shall keep out of the way of:

I. Vessel under sail.

II. A vessel restricted in her ability to maneuver.

A. I only
B. II only
C. I and II
D. Neither I nor II

25

LESSON 3
ANSWERS

QUESTION	ANSWER	PAGE
1	A	15
2	C	15
3	B	15
4	D	15
5	A	15
6	B	16
7	C	16
8	A	16
9	B	16
10	C	16
11	C	16
12	A	16
13	C	16
14	A	16
15	D	16
16	D	16
17	D	17
18	D	17
19	C	17
20	A	17, 18, 23, 24
21	A	18
22	C	18
23	C	18
24	B	18

QUESTION	ANSWER	PAGE
25	A	18
26	C	18
27	D	18
28	C	18
29	A	18
30	B	18
31	A	18
32	B	18
33	C	18
34	C	18
35	C	18
36	C	18
37	C	18
38	A	18
39	A	18
40	B	19
41	C	19
42	C	19
43	B	19

STEERING AND SAILING

Conduct of Vessels in Restricted Visibility

Reading Assignment: 4
Pages 21 through 22 of the text.

OBJECTIVES

To successfully complete this assignment, you must study the text and master the following objectives:

1. Explain the rules governing the conduct of vessels in restricted visibility.
2. State what must be determined if another vessel is detected on radar during conditions of restricted visibility.
3. Explain the action a vessel should take upon hearing a fog signal forward of her beam during conditions of restricted visibility.

1. Rule 19 governs the conduct of vessels operating in or near areas of restricted visibility where conditions prevent _____.

   A. the use of radar for navigation
   B. action to avoid the risk of collision
   C. mutual responsibility for safe passing
   D. visual contact with one another.

2. Rules for restricted visibility are applicable _____.

   A. only when your vessel is in fog
   B. only when your vessel is in or near a fog bank
   C. only when your vessel is in restricted visibility
   D. whenever your vessel is in or near an area of restricted visibility

3. What action should be taken by a vessel that hears a fog signal forward of her beam but from an unknown direction?

   A. Maintain her course and speed.
   B. Change course away from the sound of the signal.
   C. Reduce her speed to the minimum at which she can maintain her course.
   D. Answer the signal and change course away from the sound of the signal.

4. All vessels are required to _____ in restricted visibility.

   A. travel at a safe speed
   B. obey the half distance rule
   C. anchor
   D. proceed at no more than 5 knots

5. You have been plotting a vessel for 12 minutes in thick fog. You hear a fog signal ahead, what must you do?

   I. Stop you engines.
   II. Change course substantially to starboard.

   A. I only
   B. II only
   C. I and II
   D. Neither I nor II

6. Which of the following statements is/are correct, when using information obtained from radar to avoid a close quarters situation?

I. Radar information is dependable for all targets.

II. Alteration of course should be made when radar shows a close quarters situation.

A. I only
B. II only
C. I and II
D. Neither I nor II

7. In fog, your radar shows another vessel ahead. Which should you avoid?

I. Change of course to port unless overtaking.

II. Altering course toward the vessel on or about your beam.

A. I only
B. II only
C. Both I and II
D. Neither I nor II

8. You are underway on the high seas in restricted visibility when a radar contact of another vessel is made. Upon plotting the target, you determine that it is approaching you end-on with a CPA of 1/10 of a mile. Which is correct?

I. You may maintain your present course and speed until the signal of the other vessel is heard.

II. You must take avoiding action in ample time, based on the radar information.

A. I only
B. II only
C. I and II
D. Neither I nor II

9. You are steaming in reduced visibility. You have a contact on the radar and are plotting its course. It is crossing your course from starboard to port and its CPA will be 7/10 of a mile. Which of the following statements is correct?

I. You must alter course to pass astern of it.

II. The other vessel must keep its course and speed until it sights you.

A. I only
B. II only
C. I and II
D. Neither I nor II

10. Whenever appropriate, a vessel detecting by radar alone the presence of another vessel during conditions of restricted visibility should _____.

A. assume the responsibilities of the give-way vessel
B. assume the responsibilities of the stand-on vessel
C. maintain a plot of the developing situation
D. indicate the use of radar through specific sound signals

11. If a vessel detects by radar alone the presence of another vessel forward of the beam, it shall avoid:

A. in all cases, altering course to port.
B. altering course to port, except when overtaking.
C. taking any action until a fog signal is heard.
D. large course changes.

12. You hear a fog signal of another vessel forward of your beam. Which will you NOT do?

A. Reduce to bare steerageway.
B. Take all way off (if necessary).
C. Navigate with caution.
D. Keep course and speed.

13. A vessel hearing apparently forward of its beam the fog signal of another vessel, the position of which has not been ascertained, shall:

I. If necessary take all way off.

II. Reduce its speed to the minimum at which it can be kept on its course.

A. I only
B. II only
C. I and II
D. Neither I nor II

14. Except when risk of collision does not exist, any vessel hearing a fog signal forward of its beam in restricted visibility is _____.

A. required to reduce speed to bare steerageway
B. required to stop its engines
C. required to take all way off
D. allowed to continue after sounding the danger signal

15. You are steaming in a fog on the high seas. You are plotting a target on the radar and calculate its CPA to be about 1/2 mile. The target is on your port bow and is crossing from port to starboard. Which of the following statement(s) is/are correct?

I. You must keep your course and speed until you hear its fog signal.

II. Upon hearing its fog signal you shall reduce speed to the bare minimum necessary for you to maneuver.

A. I only
B. II only
C. I and II
D. Neither I nor II

30

LESSON 4
ANSWERS

QUESTION	ANSWER	PAGE
1	D	21
2	D	21
3	C	21
4	A	21
5	D	21
6	B	21
7	C	21
8	B	21
9	D	21
10	C	21
11	B	21
12	D	21
13	C	21
14	A	21
15	B	21

LIGHTS AND SHAPES

Reading Assignment: 5
Pages 23 through 44 of the text.

OBJECTIVES

To successfully complete this assignment, you must study the text and master the following objectives:

1. Describe when and under what conditions the rules pertaining to lights and shapes apply.
2. Memorize the definitions used in the rules concerning vessel lights.
3. Describe the basic light requirements for power-driven vessels underway.
4. Identify the day shapes and lights required for power-driven vessels conducting towing and pushing operations.
5. Describe the rules pertaining to lights and shapes for sailing vessels underway and vessels under oars.
6. Recognize the lights and shapes exhibited by vessels engaged in fishing operations.
7. Explain the requirements for displaying lights and shapes on vessels that are not under command and restricted in their ability to maneuver.
8. Identify the lights and shape that a vessel constrained by her draft may exhibit.
9. Identify the lights that a pilot vessel must exhibit.
10. Identify the lights and shapes required for vessels at anchor and vessels aground.

1. All these factors affect the application of the rules concerning vessel lights and shapes EXCEPT _____.

   A. weather conditions
   B. vessel construction
   C. type of propulsion
   D. operational requirements

2. The navigation lights prescribed by the rules MUST be exhibited:

   I. From sunset to sunrise.

   II. From sunrise to sunset in restricted visibility.

   A. I only
   B. II only
   C. Both I and II
   D. Neither I nor II

30

3. According to the rules, shapes, where required, must be shown when?

A. Sunrise to sunset.
B. By day.
C. By both night and day.
D. Sunset to sunrise.

4. Which statement(s) pertain(s) to a masthead light?

I. Placed over the fore and aft center line of the vessel.

II. Shows over an arc of the horizon of 220 degrees.

A. I only
B. II only
C. I and II
D. Neither I nor II

5. What is the color of a towing light?

A. Blue
B. Yellow
C. White
D. Green

6. An identifying feature of a vessel's MASTHEAD light is that it _____.

A. is red in color
B. flashes continuously
C. shows a full 360-degree arc
D. is white in color

7. By observing her colored sidelight, the heading of a vessel may be determined within _____ of the compass.

A. 112.5°
B. 90.0°
C. 67.5°
D. 45.0°

8. A "towing light" is which of the following?

A. 225 degree yellow light.
B. 360 degree white light.
C. 135 degree yellow light.
D. 360 degree flashing yellow light.

9. A "flashing light" as used in the '72 COLREGS flashes AT LEAST _____ times per minute.

A. 80
B. 100
C. 120
D. 150

10. The stern light for a vessel of 50 meters in length would have a minimum range of visibility of _____.

A. 1 mile
B. 2 miles
C. 3 miles
D. 5 miles

11. A power-driven vessel of 50 meters in length would have a masthead light with which of the following minimum ranges of visibility?

A. 6 miles
B. 5 miles
C. 3 miles
D. 2 miles

12. A naval vessel that is operating without lights and is alone on maneuvers on the high seas should, on approach of shipping, do which of the following?

I. Sound a whistle signal of one prolonged blast followed by two short blasts.

II. Consider itself privleged and maintain course and speed.

A. I only
B. II only
C. Both I and II
D. Neither I nor II

40

13. You see ahead two white lights in a vertical line and both side lights of an approaching vessel, which statement(s) is/are true?

I. This could be a towing vessel rigidly connected to a tow pushing ahead.

II. This could be a vessel of under 40 meters in length underway.

A. I only
B. II only
C. I and II
D. Neither I nor II

14. At night, a power-driven vessel underway, of _____ or more meters in length must carry in addition to its masthead, side, and stern lights _____.

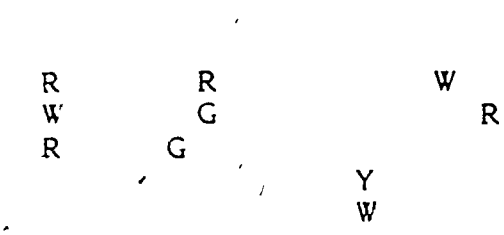
A. 50, a second masthead light
B. 150, a flare-up light
C. 100, a flashing yellow light
D. 50, three red lights where best seen

15. Which of the following statements is true regarding an air-cushion vessel?

A. Exhibits a 225° flashing yellow light at all times when underway.
B. Exhibits an all-round flashing yellow light only when operating in the non-displacement mode.
C. Exhibits an all-round flashing blue light at all times when underway.
D. Exhibits a 225° flashing light only when in the non-displacement mode.

16. Which of the following would be a power-driven vessel when towing?

A. B. C. D.



17. The lights shown below indicate which of the following?

A. A large vessel aground.
B. A vessel laying a submarine cable.
C. A vessel towing another vessel astern, length of tow over 200 meters.
D. A vessel engaged in mine laying.

W
W
W
R

18. You see a vessel showing the lights indicated on the high seas. What is it?

W
W
R

A. A vessel engaged in fishing.
B. A vessel towing astern.
C. A vessel not under command.
D. A vessel under sail.

19. While overtaking a vessel at night, you notice a steady yellow light which is above its stern light. The vessel is _____.

A. pushing ahead
B. towing alongside
C. towing astern
D. a hovercraft in the non-displacement mode

20. In inland waters during daylight, a vessel towing astern with a length of tow over 200 meters would show a black _____.

A. diamond
B. ball over a black diamond over a black ball
C. cylinder
D. cone

21. In inland waters, a power-driven vessel when towing will display masthead lights in a vertical line as follows: Three white _____.

A. 225 degree lights when length of tow exceeds 200 meters
B. all-round lights when length of tow exceeds 200 meters
C. all-round lights when length of tow is less than 200 meters
D. 225 degree lights regardless of the length of the tow

22. A vessel displaying three white lights in a vertical line indicates she is _____.

A. towing one or more vessels in a tow longer than 200 meters
B. being towed in a tow longer than 200 meters
C. towing one or more vessels in tow less than 200 meters
D. being towed in a tow less than 200 meters

23. A vessel displaying two white lights in a vertical line indicates she is _____.

A. towing a vessel in a tow less than 200 meters
B. towing more than one vessel in a tow more than 200 meters
C. not under command making headway
D. restricted in her ability to maneuver

24. What shape identifies a daylight towing operation over 200 meters in length?

A. Diamond
B. Cone
C. Ball
D. Square

25. In viewing this towing situation at night from abeam, you should see each vessel showing a _____ light.

A. red side
B. green side
C. masthead
D. forward white

26. Length of the tow is measured from the stern of the towing vessel to:

I. Bow of the last vessel being towed.

II. Stern of the last vessel being towed.

A. I only
B. II only
C. I and II
D. Neither I nor II

27. When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit with an overall length exceeding 200 meters, the following lights would be displayed underway:

A. Three masthead lights in a vertical line forward, another masthead light abaft and higher, side lights and a stern light.
B. Two masthead lights in a vertical line forward, another masthead light abaft and higher, side lights and a stern light.
C. One masthead light forward, another masthead light abaft and higher, side lights, a stern light and a towing light.
D. One masthead light forward, another masthead light abaft and higher, side lights and a stern light.

28. If you sighted the lights shown on international waters, what would they indicate?

W
W
R R

A. Pipeline or construction.
B. A vessel pushing ahead.
C. A vessel towing astern.
D. A vessel towing astern less than 200 meters.

29. A vessel being towed astern shows _____.

A. side lights only
B. side lights and stern light only
C. side lights and masthead lights only
D. side lights and towing lights only

30. The light display on a composite unit being pushed ahead is the same as a vessel _____.

A. towing
B. underway
C. being towed astern
D. being towed alongside

31. What lights should be displayed by a vessel that is not part of a composite unit but is being pushed ahead?

A. Two bright white lights in line on the forepart of the vessel.
B. A bright white light in the forepart amidship.
C. A small white light abaft the funnel or aftermast.
D. Side lights at the forward end.

32. Regulations require sailing vessels and power-driven vessels underway to exhibit the same lights with the EXCEPTION of a _____ light.

A. red side
B. green side
C. stern
D. masthead

33. You sight the lights shown below in international waters. What would it indicate?

R
G
G R

A. A vessel trawling.
B. A vessel not under command.
C. A vessel dredging.
D. A sailing vessel underway.

34. At night, you sight the lights of a vessel; a red over a green light with sidelights. What would they indicate?

A. A vessel trawling.
B. A sail vessel engaged in fishing.
C. A sail vessel underway.
D. A sail vessel underway but not under command.

35. You sight a vessel showing a white light under a green light that would indicate _____.

A. fishing with nets
B. engaged in underwater operations
C. surveying
D. trawling

36. Which statement(s) is/are correct about a sailing vessel 30 meters in length underway at night?

I. She may carry a green light over a red light.

II. The lights in I are visible over 225 degrees of the compass.

A. I only
B. II only
C. I and II
D. Neither I nor II

37. In compliance with the rules, a vessel under oars which is underway at night MUST have a _____ available.

A. temporary yellow stern light
B. hand held white light
C. set of portable side lights
D. retractable masthead light

38. Which of the following day signals should be carried by a vessel proceeding under sail and power at the same time?

A. One black ball forward.
B. A cone, point downwards.
C. A basket where best seen.
D. No special signal is displayed.

39. A fishing vessel underway that is fishing with gear extending 160 meters displays a _____.

A. double cone combination only
B. double cone combination and a cone with the point upwards in the direction of the gear
C. double cone combination and a black ball
D. single cone and a black ball

40. A vessel engaged in trawling at night and making way shows _____.

A. white over green plus side lights and stern light
B. red over white plus side lights and stern light
C. green over white plus side lights and stern light
D. green over white

41. Your vessel is fishing at night with nets and lines on the high seas. It is at anchor. Which of the following lights should you display?

I. A red light vertically over a white light.

II. The proper anchor lights for a vessel of your size.

A. I only
B. II only
C. I and II
D. Neither I nor II

42. You see a vessel displaying a red light over a white light, and no other lights are present. Which of the following statements is/are correct?

I. This vessel is not making way through the water.

II. This vessel could be engaged in trolling.

A. I only
B. II only
C. I and II
D. Neither I nor II

43. A vessel displaying two cones with the apexes together in a vertical line is a _____.

A. sailing vessel
B. minesweeper
C. vessel trawling
D. dredge

44. Which statement(s) is/are correct about a vessel engaged in trawling at night?

I. She carries her side lights and stern light only when making way.

II. If 50 meters and over in length, she carries a mast head light.

A. I only
B. II only
C. I and II
D. Neither I nor II

45. What rhyme can help you identify a vessel engaged in nighttime fishing operations?

A. "Side by side, white and green, means a fisherman in the stream."
B. "Red over white means fishing at night."
C. "When you sight green over red, expect a fisherman ahead."
D. "Fishing boats at night are seen, showing the same lights on each beam."

46. A fishing vessel underway at night and NOT fishing displays _____.

A. two red lights in a vertical line
B. a red light over a white light in a vertical line
C. no lights, but must have a combination lantern ready to display
D. the lights for a vessel of her length underway

47. A vessel not under command has been compelled to anchor. By day, which signal should be displayed?

A. Anchor ball only.
B. Two black balls, one over the other.
C. Three black balls, one over the other.
D. Anchor ball forward and two black balls, one over the other, from where best seen.

48. At night, what lights would a vessel not-under-command and not making way show?

A. Only normal running lights.
B. Red over red, side lights, and stern lights.
C. Red over red where best seen.
D. Red over red over red where best seen.

49. While underway in the daytime, you see a vessel ahead displaying two black balls in a vertical line. Which of the following could it be?

I. A sea-going power-driven vessel not under command.

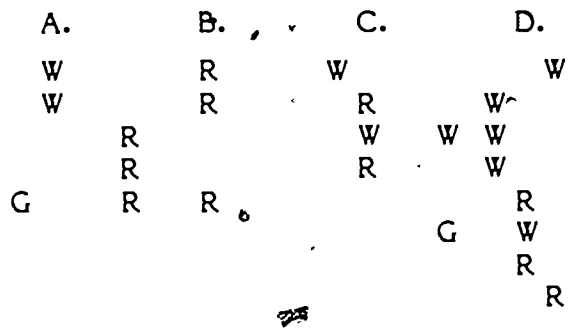
II. A self-propelled vessel underway engaged in dredging operations.

A. I only
B. II only
C. I and II
D. Neither I nor II

50. At sea two red lights indicate a vessel _____.

A. engaged in laying cable
B. not under command
C. launching and recovering aircraft
D. All of the above

51. Which is a vessel not under command and making way through the water?



52. Which vessel does NOT show sidelights?

A. Underway and not making way.
B. Underway and not under command.
C. Not under command and not making way.
D. A vessel trolling.

53. Your ship is underway and you are the watch officer. The engineroom calls and says the main propulsion plant has been lost. You should do all the following EXCEPT _____.

A. put up two red lights
B. extinguish your masthead lights
C. extinguish your side lights and stern light
D. show a flare-up light when approached

54. A vessel engaged in replenishment on the high seas shall display which of the following day signals?

A. Two balls in a vertical line.
B. One ball over and below one diamond.
C. A red globe over white diamond over red globe.
D. Three balls in a vertical line.

55. At night, what lights would a Coast Guard buoy tender show while working a buoy?

A. Only normal running lights.
B. Red over white over red where best seen.
C. Red over red where best seen.
D. Red over red over red where best seen.

38

56. The dayshape for a Coast Guard buoy tender working a buoy in inland waters is _____.

A. two orange and white vertical striped balls
B. black/ball-diamond-ball
C. red/ball-ball
D. black/diamond-ball-diamond

57. What lights, in addition to running lights, are prescribed for a vessel restricted in her ability to maneuver?

A. White-red-white in a vertical line.
B. White-white-red in a vertical line.
C. Red-red in a vertical line.
D. Red-white-red in a vertical line.

58. A vessel engaged in towing where the tow prevents her from changing course shall carry:

A. Only the lights for a vessel towing.
B. Only the lights for a vessel restricted in her ability to maneuver.
C. The lights for a towing vessel and the lights for a vessel not under command.
D. The lights for a towing vessel and the lights for a vessel restricted in her ability to maneuver.

59. You sight a vessel, head to head with that of your own, showing shapes as in accompanying sketch, you would: (All shapes are black. B=ball, D=diamond)

B
D
B

B D
B D

A. Sound two short blasts as you alter course to port.
B. Sound one short blast as you alter course to starboard.
C. Sound one prolonged blast and await her reply.
D. Sound one long blast and await her reply.

60. A dredge indicates the side which is obstructed by displaying _____ on that side.

A. two balls in a vertical line
B. two diamonds in a vertical line
C. one ball
D. two balls

61. A dredge indicates the side you may pass by displaying _____ on that side.

A. one ball
B. one diamond
C. two balls in a vertical line
D. two diamonds in a vertical line

62. At night on a dredging vessel, two all-round green lights indicate the side on which _____.

A. the discharge pip is located
B. other vessels may safely pass
C. an obstruction exists
D. a loading barge is moored

63. A vessel engaged in diving operations shows:

A. a rigid replica of the BRAVO flag.
B. three red lights where best seen.
C. a rigid replica of the ALFA flag.
D. three green lights where best seen.

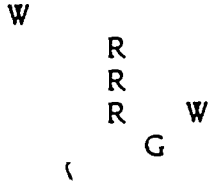
64. Which display indicates a vessel conducting minesweeping operations?

A. Three balls in a vertical line.
B. Two balls in a vertical line.
C. One ball near the foremast and one ball at each yardarm.
D. One diamond near the foremast and one ball at each yardarm.

65. Which of the following vessels is NOT required to display not under command lights in inland waters?

A. Vessels less than 20 meters.
B. Vessels less than 7 meters.
C. Vessels less than 12 meters.
D. Vessels less than 15 meters.

66. You sight a vessel showing the lights shown in the accompanying sketch. By day, which of the following shapes would this vessel display? (B=ball, D=diamond, C=cylinder)



A.	B.	C.	D.
B	B		
D	B	C	D
B			D

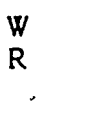
67. You should recognize three all-round RED lights in a vertical line as identifying a vessel having _____.

A. a mechanical steering casualty
B. requested the services of a pilot
C. a submerged object in tow
D. restricted movement due to her draft

68. A vessel displaying a white light over a red light in addition to her running lights is a _____.

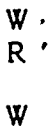
A. fishing vessel underway and fishing
B. vessel constrained by her draft
C. power-driven pilot vessel underway on station
D. sailing pilot vessel underway not on pilotage duty

69. You see a vessel on the high seas displaying the lights shown below. Which of the following is it?



A. Power-driven pilot-vessel underway on station.
B. Self-propelled dredge underway and dredging.
C. Vessel fishing with nets making way.
D. Tug towing a submerged object on a hawser.

70. You see the lights as shown at night. Which of the following statements is/are correct?



I. This could be a pilot vessel at anchor.

II. This could be a pilot vessel underway.

A. I only
B. II only
C. I and II
D. Neither I nor II

71. What light arrangement identifies a vessel at anchor which is over 50 meters in length?

A. Two all-round white lights, one in the fore part and one at the stern.
B. A flashing red light above the masthead light.
C. Two all-round white lights on the bow.
D. A single, vertically spaced, all-round red light over the stern light.

72. A day shape in the form of a single ball displayed in the fore part of a vessel indicates that the vessel has _____.

A. completed anchoring
B. a pilot aboard
C. cleared customs
D. a propulsion casualty

73. What day shape would a vessel aground in international waters display?

A. Two black balls.
B. Three black balls.
C. Two red balls.
D. A black diamond.

40

74. You see the lights shown below. Which one of the statements is/are correct?

R
R

W

I. It could be a vessel not under command at anchor.

II. It could be a vessel aground.

A. I only
B. II only
C. I and II
D. Neither I nor II

75. Which of the following signals would a vessel aground on the high seas display?

I. Two black balls in a vertical line and an anchor ball forward.

II. Two red lights in a vertical line and the prescribed anchor lights.

A. I only
B. II only
C. I and II
D. Neither I nor II

LESSON 5
ANSWERS

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18	B	27
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66	C	40
67	D	40
68	C	41
69	A	41
70	C	41
71	A	42
72	A	42
73	B	42
74	B	42
75	B	42

SOUND AND LIGHT SIGNALS

Reading Assignment: 6
Pages 51 through 63 of the text.

OBJECTIVES

To successfully complete this assignment, you must study the text and master the following objectives:

1. Recognize the terminology pertaining to sound signals.
2. Describe maneuvering and warning signals for vessels in various situations.
3. Identify the sound signals required of vessels in various situations when maneuvering in conditions of restricted visibility.
4. Define the sound and light signals used to attract attention.
5. Recognize signals indicating distress and the need for assistance.
6. Identify the distinctive lights authorized for submarines.
7. State the subject matter contained in the Exemption Rule (Rule 38).

1. The Navigation Rules define the duration of a "short blast" as about _____ second(s).

   A. 1
   B. 2
   C. 3
   D. 4

2. According to the Navigation Rules, a "prolonged blast" should last _____ seconds.

   A. up to 3
   B. from 4 to 6
   C. about 8
   D. more than 10

3. International maneuvering signals are:

   A. signals of intent.
   B. signals of action.
   C. given only by the privileged vessel.
   D. not required if you have radio contact on VHF channel 13.

4. Under the Inland Rules of the Road, a whistle signal is a _____.

   A. signal of execution
   B. signal of distinction
   C. courtesy signal
   D. signal of intent

5. Under which of the following circumstances should a vessel indicate by whistle signals that its engines are going astern?

   I. On visually sighting another vessel.

   II. On hearing the fog signal of another vessel.

   A. I only
   B. II only
   C. I and II.
   D. Neither I nor II

45

6. You are backing out of a slip in international waters and can be seen by an approaching vessel. Which of the following would you give?

A. One prolonged blast.
B. Three prolonged blasts.
C. One short blast, one prolonged blast, one short blast.
D. Three short blasts.

7. Three short blasts are:

A. always required when leaving a slip.
B. a maneuvering signal, required when your engines are operating astern.
C. required when passing a dredge in a narrow channel.
D. when your vessel's engines are operating astern with another vessel in sight.

8. Two power driven vessels are meeting in a narrow channel. Which of the following statements is/are correct?

I. Each makes one short blast and they pass starboard to starboard.

II. Neither vessel is privileged in this situation.

A. I only
B. II only
C. I and II
D. Neither I nor II

9. Vessel I sounds one short blast. It intends to:

I. Hold course and speed.

II. Vessel II should sound 1 short blast.

A. I only
B. II only
C. I and II
D. Neither I nor II

10. If a power-driven vessel overtakes another power-driven vessel (in open water) and does not have to change course in order to pass on the starboard side of the other vessel, then she should sound:

A. 1 short blast.
B. 2 prolonged and one short blast.
C. 2 short blasts.
D. no signals.

11. Your vessel is leaving a berth by backing out and can be seen by an approaching vessel. Which of the following signals should the approaching vessel sound?

I. A prolonged blast of the whistle.

II. Three short blasts of the whistle.

A. I only
B. II only
C. I and II
D. Neither I nor II

12. You are meeting a vessel in international waters. What should you do?

A. Sound one blast and come right.
B. Sound one blast and wait for its answer.
C. Sound two blasts and come right.
D. Sound two blasts and wait for an answer.

13. In international waters in a meeting situation:

I. You must alter course to port and sound two short blasts.

II. You must alter course to starboard and sound one short blast.

A. I only
B. II only
C. Both I and II
D. Neither I nor II

14. Power-driven vessels are required to sound the one and two short blast maneuvering signals:

A. in all right-of-way situations.
B. whenever in sight of another vessel of any description.
C. whenever in sight of another power-driven vessel.
D. whenever there is another vessel in the vicinity (including restricted visibility).

15. Whistle signals to signify COURSE CHANGES must be sounded _____.

A. in fog
B. when vessels are in sight of one another
C. when one vessel can be sure of hearing the other vessel's answer
D. every time you alter course

16. Vessels A and B are in sight of one another. Vessel A sounds one short blast. What is she indicating?

A. Intention to alter course to starboard.
B. That she is altering course to starboard.
C. Intention to alter course to port.
D. That she is altering course to port.

17. Three short blasts on the whistle indicates that the vessel's engines are backing at _____ speed.

A. one-third
B. two-thirds
C. full
D. any

18. Which power-driven vessel may sound THREE short blasts on the whistle?

A. A vessel backing down full to avoid crossing ahead of a stand-on vessel.
B. A vessel in dense fog putting her engines full speed astern.
C. A vessel approaching a blind curve in the channel and hearing one prolonged blast from an approaching vessel.
D. A vessel backing down on her engines while mooring to a pier.

19. Two short blasts in inland waters is a signal of _____.

A. intention and need not be answered
B. intention and must be answered
C. execution and need not be answered
D. execution and must be answered

20. In an overtaking situation, a whistle signal of TWO prolonged blasts followed by ONE short blast by the overtaking vessel indicates her intention to _____.

A. request the services of the pilot on the overtaken vessel
B. overtake and pass on the starboard side
C. remain astern until safe to pass
D. follow the overtaken vessel to the next anchorage

21. The supplementary light signal indicating a turn to port consists of _____ flash(es).

A. one
B. two
C. three
D. four

22. A power-driven vessel overtaking you in inland waters sounds two short blasts. If you think it is dangerous for her to pass, you should sound _____.

A. one prolonged blast followed by two short blasts
B. two short blasts
C. three short blasts
D. five or more short, rapid blasts

23. You are on a vessel being overtaken in a narrow channel in international waters where you have to take action to permit safe passage. The overtaking vessel wishes a port side passage and sounds the appropriate signal. You are in agreement. What signal should you sound?

A. 2 prolonged blasts.
B. 1 prolonged, one short, one prolonged, one short in that order.
C. 2 prolonged, 2 short.
D. 2 prolonged, 1 short.

24. In an overtaking situation in inland waters, the vessel being overtaken can agree to a proposal by using what signal?

A. Repeating the signal proposed.
B. One prolonged/one short/one prolonged/one short.
C. One short/one prolonged/one short/one prolonged.
D. None of the above.

25. When either vessel, in an approaching situation fails to understand the intentions of the other vessel, which one sounds the danger signal?

A. Vessel in doubt.
B. Stand-on vessel.
C. Give-way vessel.
D. Vessel to the port.

26. In a crossing situation, which vessel, if any, may sound the danger signal?

A. Give-way vessel.
B. Stand-on vessel.
C. Either vessel.
D. Neither vessel.

27. You are in charge of the stand-on power driven vessel in the crossing situation. You feel that the give-way vessel is not taking appropriate action. Which of the following would you do first?

A. Sound the danger signal.
B. Alter course to starboard.
C. Slow or take all way off.
D. Alter course to port.

28. You are about to overtake a vessel ahead but you notice that its movements are becoming erratic with respect to course and speed. You should:

I. Sound the Danger Signal.

II. Increase you speed to overtake the other vessel more quickly.

A. I only
B. II only
C. I and II
D. Neither I nor II

29. In international waters, a vessel approaching a bend where an approaching vessel may not be seen would:

A. Sound one prolonged blast.
B. Sound the danger signal.
C. Sound one short blast.
D. Not sound any signal under these rules.

30. Upon nearing a bend in a channel where oncoming traffic may be obscured, a vessel sounding ONE PROLONGED BLAST should expect _____ from any approaching vessel.

A. one short and one prolonged blast
B. one prolonged blast
C. two prolonged blasts
D. two short blasts

31. A vessel's engines are put full speed astern while backing from a pier into the channel in inland waters. If, due to the height of the pier, she cannot see a vessel approaching, she should sound _____.

A. one prolonged blast
B. three short blasts
C. one long blast and three short blasts
D. three short blasts and a prolonged blast

32. A sailing vessel underway in fog on a starboard tack sounds _____ blast(s) every 2 minutes.

A. one short
B. two short
C. three short
D. one prolonged and two short

33. A power-driven vessel underway, with way on, sounds what fog signals in restricted visibility?

A. One prolonged.
B. Two prolonged.
C. One prolonged, followed by two short.
D. One prolonged, followed by three short.

34. Your vessel is a power-driven vessel fishing with trolling lines. Which of the following is the correct fog signal to be sounded in reduced visibility?

A. One prolonged blast followed by two short blasts.
B. One prolonged blast of the whistle every two minutes.
C. One prolonged blast followed by three short blasts.
D. A blast of the whistle and a ringing of the bell.

35. You are proceeding in restricted visibility and you hear one prolonged blast followed by four short. What vessel is it?

A. Vessel being towed.
B. Vessel at anchor giving warning of position.
C. Pilot vessel on station and underway.
D. Vessel not under command.

36. Your vessel is underway in restricted visibility when you hear two prolonged blasts of a whistle with an interval of about 1 second between them. This signal indicates which of the following?

I. A sailing vessel underway on a port tack.

II. A power-driven vessel underway, but stopped and making no way through the water.

A. I only
B. II only
C. Either I or II
D. Neither I nor II

37. You are on a vessel during fog and hear another vessel sounding a signal of one prolonged blast followed by two short blasts. Which of the following could it be?

I. A power-driven vessel underway dead in the water.

II. A power-driven vessel pushing another ahead rigidly connected in a composite unit.

A. I only
B. II only
C. Either I or II
D. Neither I nor II

38. You hear a signal in fog of one prolonged blast followed by two short blasts, which of the following statements is/are correct?

I. This could be a vessel servicing an aid to navigation.

II. This could be a sailing vessel on the port tack.

A. I only
B. II only
C. I and II
D. Neither I nor II

39. You are navigating in international waters in fog. You hear a vessel sound a prolonged blast followed by two short blasts. This would indicate:

I. A vessel towing.

II. A vessel fishing.

A. I only
B. II only
C. I and II
D. Neither I nor II

40. Your vessel is engaged in fishing with nets during a fog. Which of the following is the correct signal to be sounded?

A. A blast or other equivalent signal.
B. Prolonged blast followed by ringing of bell.
C. Two prolonged blasts with short interval between.
D. One prolonged blast followed by two short blasts.

41. A sailing vessel underway in fog with the wind abaft the beam sounds _____ blast(s) every 2 minutes.

A. one short
B. two short
C. three short
D. one prolonged and two short

42. You are on a sailing vessel that is on the port tack in fog. Which of the following fog signals shall you sound?

A. One prolonged blast followed by 2 short.
B. Two prolonged blasts.
C. Two blasts.
D. One blast.

43. In international waters, you lose the plant. What fog signal should be sounded in restricted visibility?

A. Two prolonged blasts.
B. One prolonged blast followed by two short blasts.
C. One short blast, one prolonged blast, one short blast.
D. Five short blasts.

44. In fog, a power-driven vessel displaying a black diamond shape in the daytime on the high seas would sound a signal consisting of:

I. A prolonged blast followed by two short blasts.

II. A prolonged blast followed by three short blasts.

A. I only
B. II only
C. I and II
D. Neither I nor II

45. In fog, you hear 1 prolonged blast followed by 2 short blasts. It could be all of the following EXCEPT:

A. a vessel not under command.
B. a vessel towing astern.
C. a vessel fishing.
D. a vessel towed.

46. A vessel being towed during restricted visibility sounds:

A. one prolonged.
B. two prolonged.
C. one prolonged, followed by two short.
D. one prolonged, followed by three short.

47. A fog signal consisting of ONE SHORT, ONE PROLONGED, and ONE SHORT blast, respectively, identifies a vessel that is _____.

A. drifting toward approaching traffic
B. experiencing steering difficulties
C. stopping to adjust the length of a tow
D. indicating her anchored position

48. A vessel aground in international waters sounding a bell and gong signal could be a vessel:

A. 50 meters long.
B. >50<75 meters long.
C. >75<100 meters long.
D. 100 meters long.

49. You are at anchor in a fog and your vessel is 135 meters in length. Which of the following is the proper signal to give?

A. Rapid ringing of bell followed by three strokes.
B. One short, one prolonged, and one short blast.
C. Two prolonged blasts of the whistle.
D. Rapid ringing of bell forward followed by sounding of gong aft.

50. Your vessel which is 60 meters in length, anchors in fog. You would sound:

I. In the forward part, the bell.

II. Immediately after the ringing of the bell, the gong in the after part of the vessel.

A. I only
B. II only
C. I and II
D. Neither I nor II

51. You hear 3 strokes of the bell, followed by a rapid ringing of the bell, followed by 3 short strokes of the bell, followed by the sounding of a gong. What is it?

A. Power-driven vessel at anchor over 100 meters.
B. Vessel not under command at anchor.
C. Vessel under way making no way.
D. Vessel over 100 meters in length, aground.

52. During reduced visibility, the signal of four short blasts on a whistle indicates a _____.

A. vessel sounding the danger signal
B. vessel being towed
C. fishing vessel hauling nets
D. pilot vessel on pilotage duty

53. You are approaching the coast in fog. Ahead you hear the ringing of a bell followed by four short blasts. It would be:

A. Dredge at work while anchored.
B. Fishing vessel shooting nets.
C. Pilot boat.
D. Vessel aground.

54. Which of the following signals can be used to attract attention to a vessel on the high seas?

I. A search light.

II. A detonating signal that cannot be mistaken for a distress signal.

A. I only
B. II only
C. Either I or II
D. Neither I nor II

55. A vessel may use any light or sound signal to attract the attention of another vessel PROVIDED such signal _____.

A. is seen and fully understood by the other vessel.
B. cannot be mistaken for any other authorized signal in the rules
C. can be duplicated by the other vessel in reply
D. is not seen nor interpreted by any other vessel than the intended one

LESSON 6
ANSWERS

QUESTION	ANSWER	PAGE
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3	B	51,52
4	D	51, 52
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QUESTION	ANSWER	PAGE
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52	D	55
53	C	55
54	C	55
55	B	55

ANNEXES TO RULES

Reading Assignment: 7
Pages 65 through 85 of the text.

OBJECTIVES

To successfully complete this assignment, you must study the text and master the following objectives:

1. State the title and describe the content in general of Annex I.
2. State the title and describe the content in general of Annex II.
3. State the title and describe the content in general of Annex III.
4. State the title and describe the content in general of Annex IV.
5. State the title of Annex V, describe the lights used on law enforcement vessels, barges at banks or docks, and on dredge pipelines, and describe exemptions from shape requirements for vessels operating under bridges.

1. How is the height of a light measured under the International Rules?

   A. Vertical distance above the main deck.
   B. Vertical distance above the flying bridge deck.
   C. Vertical distance above the side lights.
   D. Vertical distance above the uppermost continuous deck.

2. Which of the following would be a vessel engaged in fishing by trawling?

   A.
   W
   R
   G

   B.
   G
   W
   R

   C.
   W
   W
   R
   W
   R
   R
   G

   D.
   R
   G
   W
   G

3. Annex III of the Navigation Rules contains information concerning _____.

   A. Technical Details of Sound Signal Appliances
   B. Positioning and Technical Details of Lights and Shapes
   C. Additional Signals for Fishing Vessels Fishing in Close Proximity
   D. Distress Signals

4. In order to attract attention, you could:

   A. Use a flare-up light.
   B. Fire a gun.
   C. Use continuous sounding of a whistle.
   D. Wave with arms outstretched.

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5. In international waters, all of the following are distress signals EXCEPT:

A. A continuous sounding with any fog-signaling apparatus.
B. Giving five or more short and rapid blasts of the whistle.
C. A gun or other explosive signal fired at intervals of about one minute.
D. Flames on the vessel (as from a burning tar barrel, etc.).

6. All the following are (true) distress signals EXCEPT:

A. Continuous sounding of fog signaling equipment.
B. 5 or more short blasts.
C. Burning of oil in a barrel on a vessel.
D. Firing of a gun at one minute intervals.

7. A vessel in distress that requires assistance should indicate this by _____.

A. firing green flares at short intervals
B. sounding one long and four short blasts on the whistle
C. continuously sounding any fog signalling apparatus
D. hoisting three red balls in a conspicuous place

8. A vessel in distress and requiring assistance may indicate this fact by _____.

A. rapidly ringing the ship's bell for 5 seconds each minute
B. sounding one prolonged and four short blasts on the whistle
C. continuously sounding any fog-signalling apparatus
D. hoisting three red balls in a conspicuous place

9. Which signal is NOT an international signal of distress?

A. November Charlie.
B. SOS in Morse Code.
C. Rockets or shells throwing green stars.
D. Explosives fired at one-minute intervals.

10. You should recognize the continuous sounding of any fog-signalling device as an indication of _____.

A. danger
B. dredging
C. distress
D. departure

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11. A vessel indicates distress and the need for assistance by displaying a shape consisting of _____.

A. a ball or anything resembling a ball positioned above or below a square flag
B. two diamond shapes separated by a ball
C. an inverted cone suspended above two diamonds
D. three balls arranged to form a triangle

12. ANNEX V of the Inland Navigational Rules contains information concerning _____.

A. technical details of sound signal appliances
B. positioning and technical details of lights and shapes
C. distress signals
D. pilot rules

13. Due to limited maneuvering capabilities, a U.S. Naval submarine on the surface displays an additional recognition characteristic consisting of an intermittent flashing _____ light.

A. red
B. blue
C. amber
D. green

14. For identification purposes at night, U.S. Navy submarines on the surface display an intermittent flashing _____ light.

A. amber
B. white
C. blue
D. red

LESSON 7
ANSWERS

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11	A	79, 80
12	D	81
13	C	85
14	A	85

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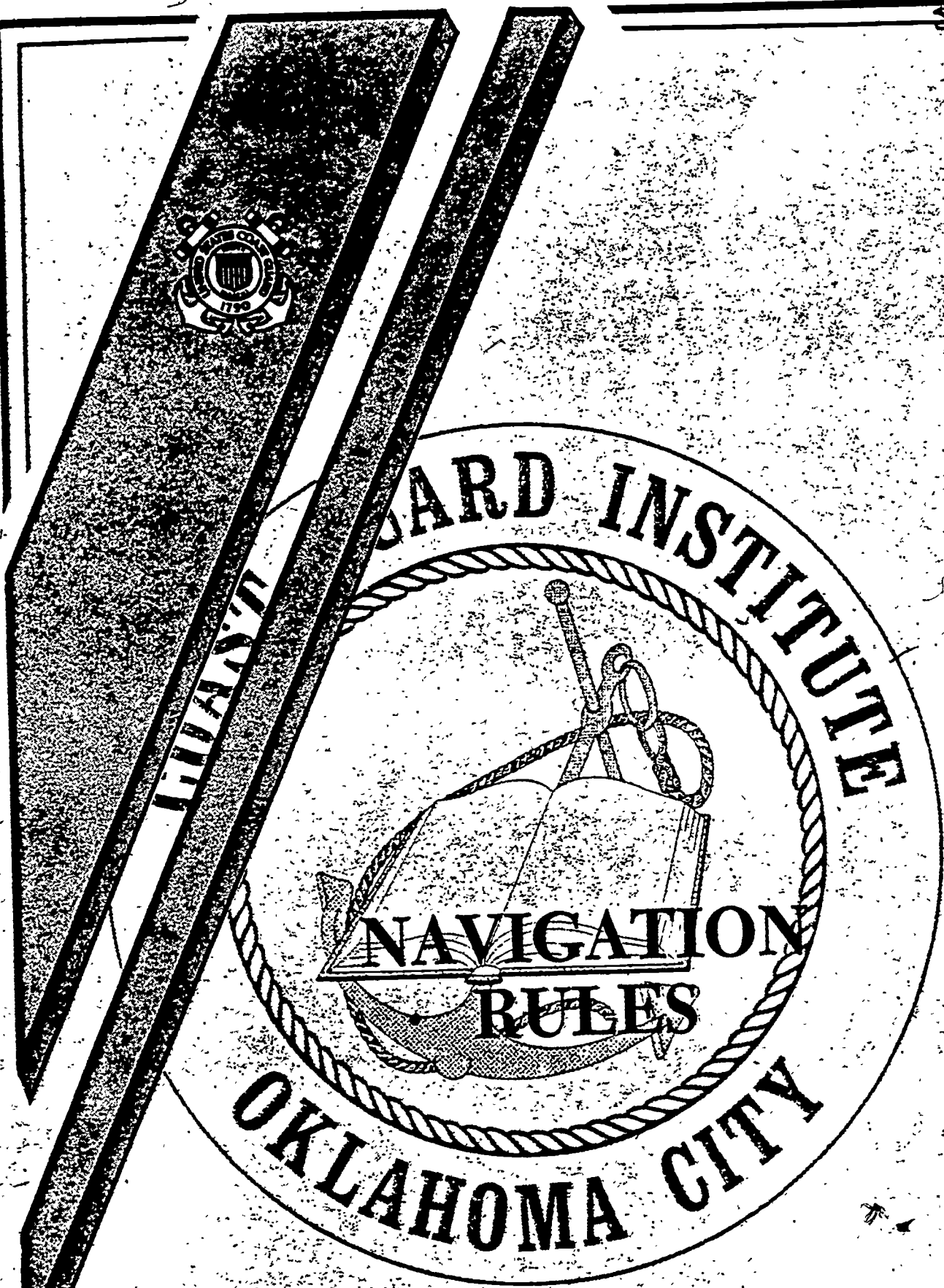

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REFERENCES

CG-169 NAVIGATION RULES, INTERNATIONAL RULES SECTION.

THE INLAND NAVIGATIONAL RULES ACT OF 1980, PUBLIC LAW 96-591 - Dec. 24, 1980.

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NOTICE TO STUDENT

IMPORTANT NOTE. This text has been compiled for TRAINING ONLY. It should NOT be used in place of official directives or publications. The text information is current according to the references listed. You should, however, remember that it is YOUR responsibility to keep up with the latest professional information available.

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INTRODUCTION

The information in this course contains the International Regulations for preventing collisions at sea ,1972 COLREGS and the Inland Navigational Rules Act of 1980. The rules are presented so that they can be compared to each other Where the International and Inland Rules differ, they are presented in separate columns. The left column is always the International Rule. The right column is the Inland Rule. When the rule is applicable to both Inland and International waters, it is presented across both columns. This will help you learn both rules, when necessary, and only one when the rule applies to all waters. Explanations and general comments which follow the rule are in italics.

International and Inland
Navigation Rules
Part A – General

INTERNATIONAL	INLAND
RULE 1	RULE 1
Application	Application
(a) These Rules shall apply to all vessels upon the high seas and in all waters connected therewith navigable by seagoing vessels.	(a) These Rules apply to all vessels upon the inland waters of the United States, and to vessels of the United States on the Canadian waters of the Great Lakes to the extent that there is no conflict with Canadian Law.
(b) Nothing in these Rules shall interfere with the operation of special rules made by an appropriate authority for roadsteads, harbors, rivers, lakes or inland waterways connected with the high seas and navigable by seagoing vessels. Such special rules shall conform as closely as possible to these Rules.	(b)(i) These Rules constitute special rules made by an appropriate authority within the meaning of Rule 1(b) of the International Regulations. (ii) All vessels complying with the construction and equipment requirements of the International Regulations are considered to be in compliance with these Rules.
(c) Nothing in these Rules shall interfere with the operation of any special rules made by the Government of any State with respect to additional station or signal lights or whistle signals for ships of war and vessels proceeding under convoy, or with respect to additional station or signal lights for fishing vessels engaged in fishing as a fleet. These additional station or signal lights or whistle signals shall, so far as possible, be such they cannot be mistaken for any light or signal authorized elsewhere under these Rules.	(c) Nothing in these Rules shall interfere with the operation of any special rules made by the Secretary of the Navy with respect to additional station or signal lights and shapes or whistle signals for ships of war and vessels proceeding under convoy, or by the Secretary with respect to additional station or signal lights and shapes for fishing vessels engaged in fishing as a fleet. These additional station or signal lights and shapes or whistle signals shall, so far as possible, be such that they cannot be mistaken for any light, shape, or signal authorized elsewhere under these Rules.
(d) Traffic separation schemes may be adopted by the Organization for the purpose of these Rules.	(d) Vessel traffic service regulation may be in effect in certain areas.
(e) Whenever the Government concerned shall have determined that a vessel of special construction or purpose cannot comply fully with the provisions of any of these Rules with respect to the number, position, range or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, without interfering with the special function of the vessel, such vessel shall comply with such other provisions in regard to the number, position, range, or arc of visibility of lights or shapes, as well sound-signaling appliances, as her Government shall have determined to be the closest possible compliance with these Rules in respect to that vessel.	(e) Whenever the Secretary determines that a vessel or class of vessels of special construction or purpose cannot comply fully with the provisions of any of these Rules with respect to the number, position, range, or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, without interfering with the special function of the vessel, the vessel shall comply with such other provisions in regard to the number, position, range, or arc of visibility of lights or shapes, as well as to the disposition and characteristics of sound-signaling appliances, as the Secretary shall have determined to be the closest possible compliance with these Rules, The Secretary may issue a certificate of alternative compliance for a vessel or

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INTERNATIONAL	INLAND
	class of vessels specifying the closest possible compliance with these Rules. The Secretary of the Navy shall make these determinations and issue certificates of alternative compliance for vessels of the Navy.
	(f) The Secretary may accept a certificate of alternative compliance issued by a contracting party to the International Regulations if he determines that the alternative compliance standards of the contracting party are substantially the same as those of the United States.

The safe navigation of a vessel on any waters is subject to internationally accepted rules. On the high seas, mariners must observe the International Regulations for Preventing Collision at Sea (COLREGS). These international "Rules of the Road" are based on agreement of maritime nations and often enacted into law by participating coutries. The International Rules or COLREGS apply to vessels on the "high seas."

The Inland Rules of the Road apply to inland waters and are statutory, that is laws enacted by Congress pursuant to Rule 1 b, of the COLREGS. The inland rules often parallel the COLREGS, that is Rule 8 under both rules addresses "action to avoid collision."

Vessels which will operate on both inland and international waters need only comply with the construction and equipment requirements of the 72 COLREGS. However, when operating on inland waters, vessels must adhere to Inland Steering and Sailing Rules, inland sound signals, and radiotelephone requirements.

Vessels of special construction or purpose whose special function would be hampered by full compliance with the technical provisions for lights, shapes, and sound-signaling applicances can apply for a certificate of alternative compliance. This certificate requires these vessels to comply as closely to the rules as their special function will allow.

Rule 2

Responsibility

(a. Nothing in these Rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences of any neglect to comply with these Rules or of the neglect of any precaution which may be required by the ordinary practice of seamen, or by the special circumstances of the case.

(b In construing and complying with these Rules due regard shall be had to all dangers of navigation and collision and to any special circumstances, including the limitations of the vessels involved, which may make a departure from these Rules neeessary to avoid immediate danger.

The "Rule of Good Seamanship" and the "Rule of Special Circumstance" concepts are presented in Rule 2. Recognizing that no body of rules can cover every possible situation, the mariner is directed to be alert to special circumstances which may require a breach of other rules to avoid danger. When the rules do not cover a particular situation, the mariner must take whatever precaution is consistent with the practice of good "seamanship."

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INTERNATIONAL	INLAND

Rule 3

General Definitions

For the purpose of these Rules except where the context otherwise requires:

(a) The word "vessel" includes every description of water craft, including nondisplacement craft and seaplanes, used or capable of being used as a means of transportation on water.

(b) The term "power-driven vessel" means any vessel propelled by machinery.

(c) The term "sailing vessel" means any vessel under sail provided that propelling machinery, if fitted, is not being used.

(d) The term "vessel engaged in fishing" means any vessel fishing with nets, lines, trawls or other fishing apparatus which restricts maneuverability, but does not include a vessel fishing with trolling lines or other fishing apparatus which do not restrict maneuverability.

(e) The word "seaplane" includes any aircraft designed to maneuver on the water.

(f) The term "vessel not under command" means a vessel which through some exceptional circumstance is unable to maneuver as required by these Rules and is, therefore, unable to keep out of the way of another vessel.

(g) The term "vessel restricted in her ability to maneuver" means a vessel which from the nature of her work is restricted in her ability to maneuver as required by these Rules and is therefore unable to keep out of the way of another vessel.

The following vessels shall be regarded as vessels restricted in their ability to maneuver:

(i) A vessel engaged in laying, servicing, or picking up a navigation mark, submarine cable, or pipeline;

(ii) a vessel engaged in dredging, surveying, or underwater operations;

(iii) a vessel engaged in replenishment or transferring persons, provisions or cargo while underway.

(iv) a vessel engaged in the launching or recovery of aircraft;

(v) a vessel engaged in minesweeping operations.

(vi) a vessel engaged in a towing operation such as severely restricts the towing vessel and her tow in their ability to deviate from their course.

(g) The term "vessel restricted in her ability to maneuver" means a vessel which from the nature of her work is restricted in her ability to maneuver as required by these Rules and is therefore unable to keep out of the way of another vessel; vessels restricted in their ability to maneuver include but are not limited to:

(i) a vessel engaged in laying, servicing, or picking up a navigation mark, submarine cable, or pipeline;

(ii) a vessel engaged in dredging, surveying, or underwater operations;

(iii) a vessel engaged in replenishment or transferring persons, provisions or cargo while underway,

(iv) a vessel engaged in the launching or recovery of aircraft;

(v) a vessel engaged in minesweeping operations.

(vi) a vessel engaged in a towing operation such as severely restricts the towing vessel and her tow in their ability to deviate from their course.

INTERNATIONAL	INLAND
(h) The term "vessel constrained by her draft" means a power-driven vessel which because of her draft in relation to the available depth of water is severely restricted in her ability to deviate from the course she is following.	(h) The word "underway" means that a vessel is not at anchor, or made fast to the shore, or aground;
(i) The word "underway" means that a vessel is not at anchor, or made fast to the shore, or aground.	(i) The words "length" and "breadth" of a vessel mean her length overall and greatest breadth;
(j) The words "length" and "breadth" of a vessel means her length overall and greatest breadth.	(j) Vessels shall be deemed to be in sight of one another only when one can be observed visually from the other;
(k) Vessels shall be deemed to be in sight of one another only when one can be observed visually from the other.	(k) The term "restricted visibility" means any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms, or any other similiar causes;
(l) The term restricted visibility" means any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms, or any other similiar causes.	(l) "Western Rivers" means the Mississippi River, its tributaries, South Pass, and Southwest Pass, to the navigational demarcation lines dividing the high seas from harbors, rivers, and other inland waters of the United States, and the Port Allen-Morgan City Alternate Route, and that part of the Atchafalaya River above its junction with the Port Allen-Morgan City Alternate Route including the Old River and the Red River;
	(m) "Great Lakes" means the Great Lakes and their connecting and tributary waters including the Calumet River as far as the Thomas J. O'Brien Lock and Controlling Works (between mile 326 and 327), the Chicago River as far as the east side of the Ashland Avenue Bridge (between mile 321 and 322), and the Saint Lawrence River as far east as the lower exit of Saint Lambert Lock;
	(n) "Secretary" means the Secretary of the department in which the Coast Guard is operating;
	(o) "Inland Waters" means the navigable waters of the United States shoreward of the navigational demarcation lines dividing the high seas from harbors, rivers, and other inland waters of the United States and the waters of the Great Lakes on the United States side of the International Boundary;
	(p) "Inland Rules" or "Rules" mean the Inland Navigational Rules and the annexes thereto, which govern the conduct of vessels and specify the lights, shapes, and sound signals that apply on inland waters; and

INTERNATIONAL	INLAND
	(q) "International Regulations" means the International Regulations for Preventing Collisions at Sea, 1972, including annexes currently in force for the United States.

Rule 3 contains general definitions that are necessary to carry out the provisions of the rules. Rule 3(a) through 3(f) are the same in both the International and Inland Rules. The definitions in Rules 3(1) through 3(q) are terms which apply only to United States inland waterways.

PART B - Steering And Sailing Rules

Section I - Conduct of Vessels in Any Condition of Visibility

INTERNATIONAL	INLAND

RULE 4

Application

Rules in this Section apply to any condition of visibility.

The rules in this section relate to look-outs, safe speed, risk of collision, action to avoid collision, narrow channels, and vessel traffic services.

RULE 5

Look-out

Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

Keeping a proper look-out is often termed the first rule of seamanship. Accordingly, it is appropriate that the first operating rule should be dedicated to the duty of look-out. Whoever is keeping a look-out must be able to give proper attention to that task, and should not be assigned or undertake duties that would interfere with this function. When there is an unobstructed all-around view at the steering station, or when there is no impairment of night vision or other impediment to keeping a proper look-out, the watch officer or helmsman may safely serve as the look-out. However, it is expected that this practice will be followed only after the situation has been carefully assessed on each occasion and it has been clearly established that it is prudent to do so. Full account shall be taken of all relevant factors, including but not limited to weather, visibility, traffic density, and proximity of navigation hazards. It is not the intent of the Rules to require additional personnel forward, if none is required to enhance safety.

RULE 6

Safe Speed

Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.

In determining a safe speed the following factors shall be among those taken into account.

(a) By all vessels:

(i) the state of visibility

(ii) the traffic density including concentrations of fishing vessels or any other vessels,

(iii) the maneuverability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions;

(iv) at night the presence of background light such as from shore lights or from back scatter of her own lights;

(v) the state of wind, sea, and current, and the proximity of navigational hazards;

(iv) the draft in relation to the available depth of water.

(b) Additionally, by vessels with operational radar:

(i) the characteristics, efficiency and limitations of the radar equipment;

(ii) any constraints imposed by the radar range scale in use;

(iii) the effect on radar detection of the sea state, weather, and other sources of interference;

(iv) the possibility that small vessels, ice and other floating objects may not be detected by radar at an adequate range;

(v) the number, location, and movement of vessels detected by radar; and

(vi) the more exact assessment of the visibility that may be possible when radar is used to determine the range of vessels or other objects in the vicinity.

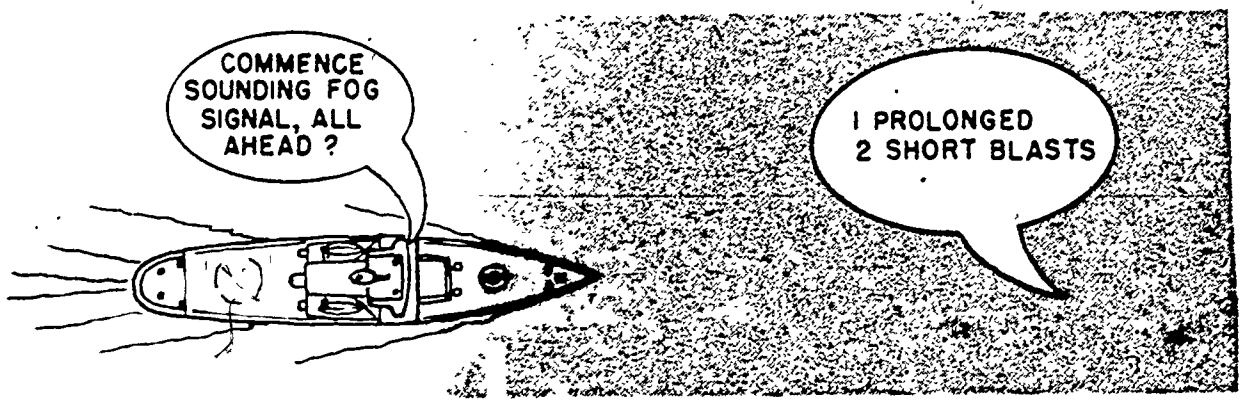

Figure 1.--What is safe speed? It is your judgment.

Rule 6 requires a vessel to proceed at a "safe speed" at ALL times. The rule is written to make mariners aware of the need for operating at a safe speed in all conditions of visibility. This does not mean the same speed will be safe in good visibility as in restricted visibility. The first mandate under this rule is to consider the state of visibility. What it does mean is that speed in any condition is intimately related to the immediate circumstances at hand. Under this rule, the prudent mariner must use the best judgment in determining what constitutes safe speed for the vessel in order that proper action can be taken to avoid collision. This rule lists a number of factors to be considered in determining a safe speed, and provides a number of precautions that a vessel equipped with operations radar must consider.

RULE 7

Risk of Collision

(a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to determine if risk of collision exists. If there is any doubt, such risk shall be deemed to exist.

(b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.

(c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information.

(d) In determining if risks of collision exists the following considerations shall be among those taken into account:

(i) Such risk shall be deemed to exist if the compass bearing of an approaching vessel does not appreciably change; and

(ii) such risk may sometimes exist even when an appreciable bearing change is evident, particularly when approaching a very large vessel or a tow or when approaching a vessel at close range.

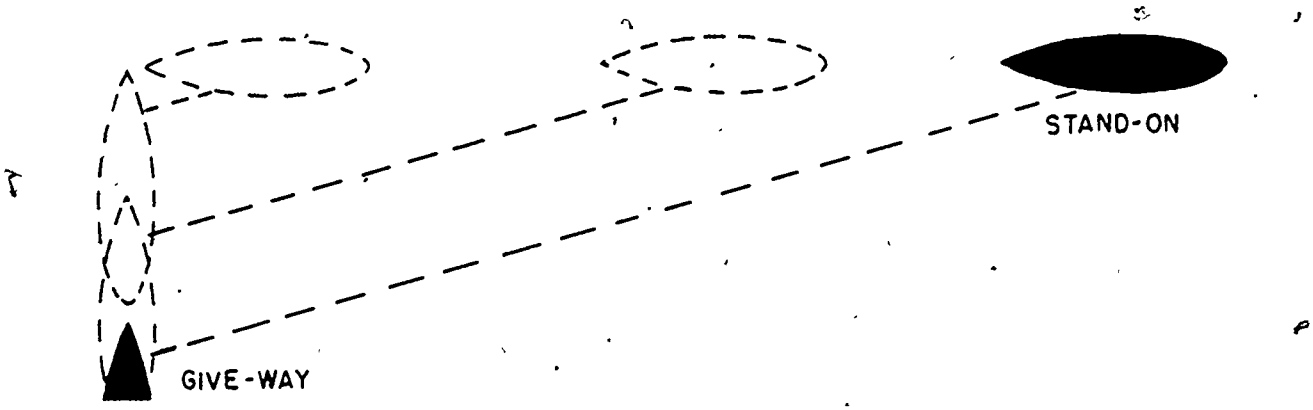

Figure 2.--Steady bearing indicates risk of collision.

Rule 7(a) admonishes every vessel to use "all available means appropriate to the prevailing circumstances and conditions," including eyes, electronic devices, and any other operational or mechanical procedure that may help in determining if "risk of collision exists."

Rule 7(b) recognizes the prevalent use of radar on all types of vessels. These rules are not intended to impose a requirement to outfit all vessels with radar. The term "equivalent systematic observation of detected objects" refers to repeated or continuous visual radar scope observation that enables the mariner to determine the risk of collision.

Rule 7(c) cautions the mariner to use all means appropriate and not to make faulty assumptions from only part of the information available. The rule recognizes that radar can be fallible and that other means may provide better information.

Rule 7(d) cautions that a risk of collision may exist even if there is appreciable change of bearing if a vessel is at close range, if it is a very large vessel, or if it is a tow.

RULE 8

Action to Avoid Collision

(a) Any action taken to avoid collision shall, if the circumstances of the case admit, be positive, made in ample time and with due regard to the observance of good seamanship.

INTERNATIONAL	INLAND

(b) Any alteration of course or speed to avoid collision shall, if the circumstances of the case admit, be large enough to be readily apparent to another vessel observing visually or by radar, a succession of small alterations of course or speed should be avoided.

(c) If there is sufficient sea room, alteration of course alone may be the most effective action to avoid a close-quarters situation provided that it is made in good time, is substantial and does not result in another close-quarters situation.

(d) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance. The effectiveness of the action shall be carefully checked until the other vessel is finally past and clear.

(e) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion.

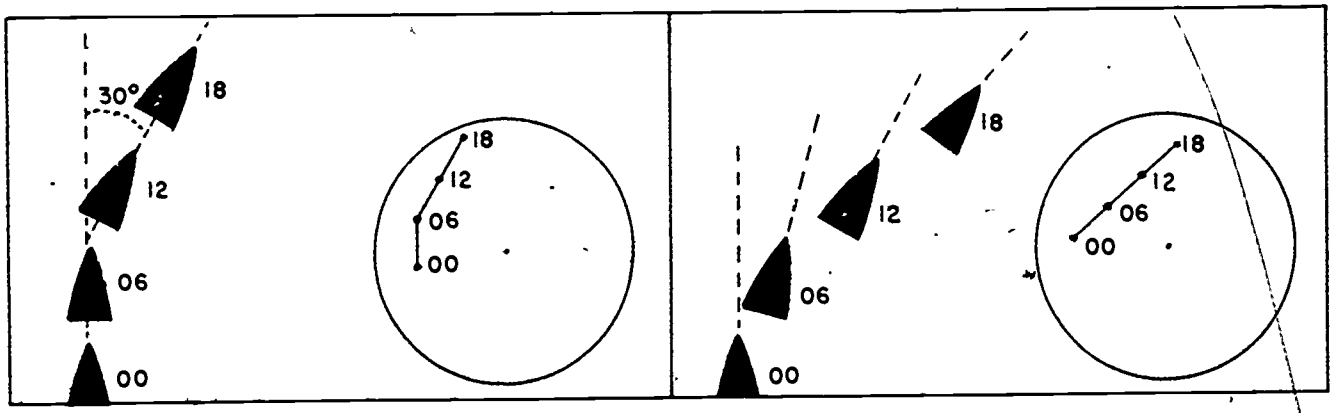

Figure 3.--Course changes should be large enough to be readily apparent to other vessels.

Rule 8 states that action to avoid collision shall be positive and taken in ample time. Course and speed changes should be readily apparent to the other vessels, and a succession of small changes should be avoided. It also states that, given sufficient sea room, an alteration of course alone may be the most effective action to avoid close quarters, provided that action does not create additional problems with vessels elsewhere in the vicinity. It requires that action taken to avoid collision results in passage at a safe distance, and that the effectiveness of the action be carefully checked until the other vessel is indeed past and clear.

Rule 8(e) requires that a vessel must, if necessary, slow down or stop not only to avoid collision but also to allow more time to assess the situation. This rule must be used in conjunction with Rule 17.

INTERNATIONAL	INLAND
RULE 9	RULE 9
Narrow Channels	Narrow Channels
(a) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.	(a)(i) A vessel proceeding along the course of a narrow channel or fairway shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable. (ii) Notwithstanding paragraph (a)(i) and Rule 14(a), a power-driven vessel operating in narrow channels or fairways on the Great Lakes, Western Rivers, or waters specified by the Secretary, and proceeding downbound with a following current shall have the right-of-way over an upbound vessel, shall propose the manner and place of passage, shall initiate the maneuvering signals prescribed by Rule 34(a)(i), as appropriate. The vessel proceeding upbound against the current shall hold as necessary to permit safe passing.
(b) A vessel of less than 20 meters in length or a sailing vessel shall not impede the passage of a vessel that can safely navigate only within a narrow channel or fairway.	
(c) A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway.	
(d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within that channel or fairway. The latter vessel may use the danger signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.	(d) A vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within that channel or fairway. The latter vessel shall use the danger signal prescribed in Rule 34(d) if in doubt as to the intention of the crossing vessel.
(e) (i) In a narrow channel or fairway when overtaking, the vessel intending to overtake shall indicate her intention by sounding the appropriate signal prescribed in Rule 34(c) and take steps to permit safe passing. The overtaken vessel, if in agreement, shall sound the same signal. If in doubt she shall sound the danger signal prescribed in Rule 34(d). (ii) This Rule does not relieve the overtaking vessel of her obligation under Rule 13.	
(f) A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an intervening obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal prescribed in Rule 34(e).	
(g) Every vessel shall, if the circumstances of the case admit, avoid anchoring in a narrow channel.	

Rule 9(a)(ii) recognizes the limited maneuverability of a downbound vessel and the need to deviate from Rule 9(a)(i), because of river current patterns when rounding a bend in twisting, narrow channels and fairways. Giving the right of way and choice in passing to downbound vessels with a following current in the waters designated in Rule 9(a)(ii) is considered essential for the safety of navigation in narrow channels and fairways.

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INTERNATIONAL	INLAND

This is the first place the Rules reference a specific size vessel, and it is significant to note that the metric system is used. From this point on, all linear measurements are given in meters, with the sole exception of the nautical mile, which remains the same.

RULE 10

Traffic Separation Schemes

(a) This Rule applies to traffic separation schemes adopted by the Organization.

(b) A vessel using a traffic separation scheme shall:

(i) proceed in the appropriate traffic lane in the general direction of traffic flow for that lane;

(ii) so far as practicable keep clear of a traffic separation line or separation zone;

(iii) normally join or leave a traffic lane at the termination of the lane, but when joining or leaving from the side shall do so at as small an angle to the general direction of traffic flow as practicable.

(c) A vessel shall so far as practicable avoid crossing traffic lanes, but if obliged to do so shall cross as nearly as practicable at right angles to the general direction of traffic flow.

(d) Inshore traffic zones shall not normally be used by through traffic which can safely use the appropriate traffic lane within the adjacent traffic separation scheme.

(e) A vessel, other than a crossing vessel, shall not normally enter a separation zone or cross a separation line except:

(i) in cases of emergency to avoid immediate danger;

(ii) to engage in fishing within a separation zone.

(f) A vessel navigating in areas near the terminations of traffic separation schemes shall do so with particular caution.

(g) A vessel shall so far as practicable avoid anchoring in traffic separation scheme or in areas near its terminations.

(h) A vessel not using a traffic separation scheme shall avoid it by as wide a margin as is practicable.

RULE 10

Vessel Traffic Services

Each vessel required by regulation to participate in a vessel traffic service shall comply with the applicable regulations.

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INTERNATIONAL	INLAND
(i) A vessel engaged in fishing shall not impede the passage of any vessel following a traffic lane.	
(j). A vessel of less than 20 meters in length or a sailing vessel shall not impede the safe passage of a power-driven vessel following a traffic lane.	

The Inter-Government Maritime Consultative Organization (IMCO) has adopted standard terms and symbols used in matters related to vessel traffic separation. These include the following:

1. Routing - A complex of measures concerning routes aimed at reducing the risk of casualties. It includes traffic separation schemes, two-way routes, tracks, areas to be avoided, inshore traffic zones, and deep water routes.

2. Traffic separation scheme - A scheme which separates traffic proceeding in opposite or nearly opposite directions by the use of a separation zone or line, traffic lanes, or other means.

3. Separation zone or line - A zone or line separating traffic proceeding in one direction from traffic proceeding in another direction. A separation zone may also be used to separate a traffic lane from the adjacent inshore traffic zone.

4. Traffic lane - An area within definite limits in which traffic is established.

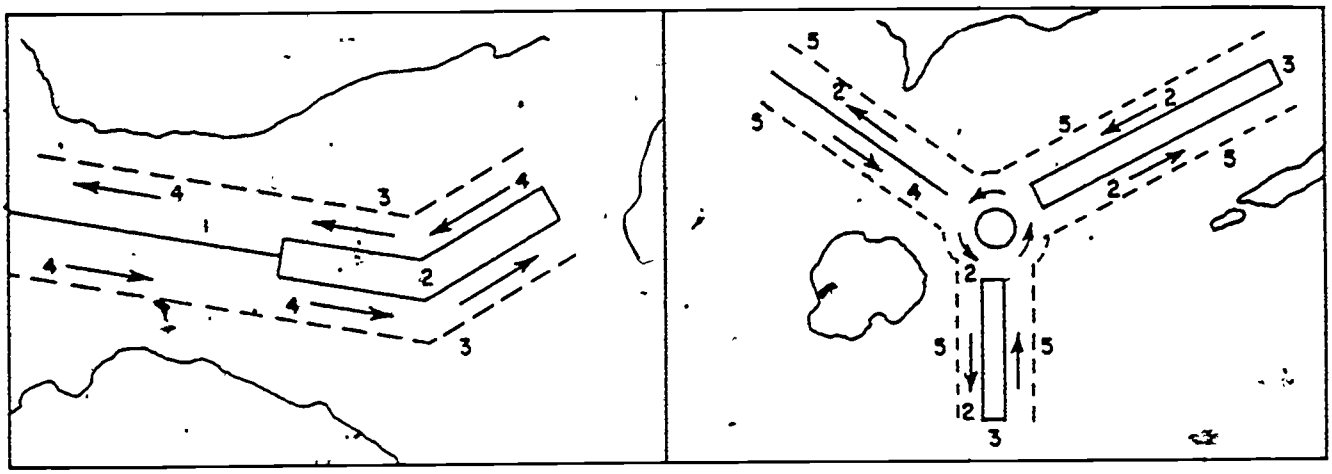
5. Roundabout - A circular area within definite limits in which traffic moves in a counterclockwise direction around a specified point or zone.

6. Inshore traffic zone - A designated area between the landward boundary of a traffic separation scheme and the adjacent coast intended for coastal traffic.

7. Two-way route - A route in an area within definite limits inside which two-way traffic is established.

8. Track - The recommended route to be followed when proceeding between predetermined positions.

9. Deep water route - A route in a designated area within definite limits which has been accurately surveyed for clearance of sea bottom and submerged obstacles to a minimum indicated depth of water.



Traffic separation by separation line and zone.

1–Separation line
2–Separation zone
3–Outside limits of lanes.
4–Arrows indicating main traffic direction

Figure 4.–Traffic separation zones.

A roundabout where several traffic separation schemes meet.

1–Circular separation zone
2–Arrows indicating traffic direction
3–Separation zone
4–Separation line
5–Outside limits of lanes

Figure 5.–Roundabout.

PART B - Steering and Sailing Rules

Section II - Conduct of Vessels in Sight of One Another

INTERNATIONAL	INLAND

RULE 11

Application

Rules in this section apply to vessels in sight of one another.

The rules in this assignment, which relate to sailing vessels, overtaking situations, head-on situations, crossing situations, action by a give way vessel, action by a stand-on vessel, and responsibilities between vessels, apply only when vessels are in sight of one another which means when each vessel can be observed visually from the other. These rules do not apply to vessels that are operating in restricted visibility.

RULE 12

Sailing Vessels

a) When two sailing vessels are approaching one another, so as to involve risk of collision, one of them shall keep out of the way of the other as follows:

i) When each has the wind on a different side, the vessel which has the wind on the port side shall keep out of the way of the other:

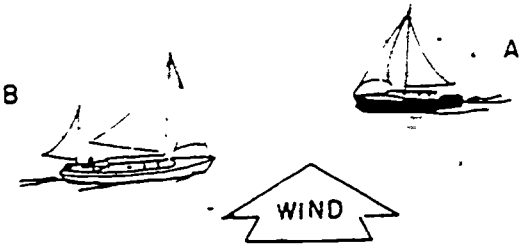
ii) when both have the wind on the same side, the vessel which is to windward shall keep out of the way of the vessel which is to leeward:

iii) if a vessel with the wind on the port side sees a vessel to windward and cannot determine with certainty whether the other vessel has the wind on the port or on the starboard side, she shall keep out of the way of the other.

b) For the purpose of this Rule the windward side shall be deemed to be the side opposite to that on which the mainsail is carried or, in the case of a square-rigged vessel, the side opposite to that on which the largest fore-and-aft sail is carried.

Reference is often made to sailing vessels on either a "starboard" or a "port tack." An explanation is in order. A sailing vessel that has the wind on the port side is on a PORT TACK. A vessel that has the wind on her starboard side is on a STARBOARD TACK. Rule of Thumb: the side of the main sail being filled by the wind determines the tack of the vessel.

The rule allows that the vessel with the best visibility keeps clear of the vessel whose visibility is restricted by her sail. Hence the rule, a sailing vessel on a port tack now must keep clear of a sailing vessel on a starboard tack.



Vessel A must "keep out of the way" of vessel B.

Figure 6.–Sailing vessels crossing.

RULE 13

Overtaking

(a) Notwithstanding anything contained in the Rules of this Section any vessel overtaking any other shall keep out of the way of the vessel being overtaken.

(b) A vessel shall be deemed to be overtaking when coming up with another vessel from a direction more than 22.5 degrees abaft her beam, that is, in such a position with reference to the vessel she is overtaking, that at night she would be able to see only the sternlight of that vessel but neither of her sidelights.

(c) When a vessel is in any doubt as to whether she is overtaking another, she shall assume that this is the case and act accordingly.

(d) Any subsequent alteration of the bearing between the two vessels shall not make the overtaking vessel a crossing vessel within the meaning of these Rules or relieve her of the duty of keeping clear of the overtaken vessel until she is finally past and clear.

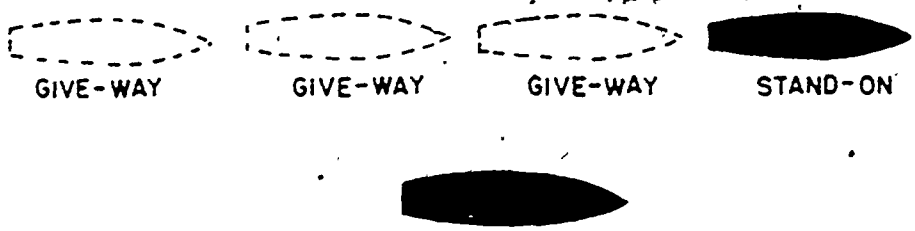


Figure 7.–Overtaking

Rule 13 recognizes the fact that the overtaking vessel should have less of a problem keeping clear and avoiding collision than the vessel being overtaken, even if the overtaken vessel has agreed to allow the maneuver.

RULE 14

Head-on Situation

(a) When two power-driven vessels are meeting on reciprocal or nearly reciprocal courses so as to involve risk of collision each shall alter her course to starboard so that each shall pass on the port side of the other.

(b) Such a situation shall be deemed to exist when a vessel sees the other ahead or nearly ahead and by night she could see the masthead lights of the other in a line or nearly in a line and/or both sidelights and by day she observes the corresponding aspect of the other vessel.

(c) When a vessel is in any doubt as to whether such a situation exists she shall assume that it does exist and act accordingly.

Rule 14(c) states that if you are in doubt as to whether you are in a meeting or crossing situation, you are to assume you are meeting and act accordingly. This is intended to reduce the risk of collision. The rule requires each vessel to turn right, which should prevent or reduce collisions resulting from left handed maneuvering.

INTERNATIONAL	INLAND
RULE 15	RULE 15
Crossing Situation	Crossing Situation
a When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.	(a) When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her starboard side shall keep out of the way and shall, if the circumstances of the case admit, avoid crossing ahead of the other vessel.
	(b) Notwithstanding paragraph (a), on the Great Lakes, Western Rivers, or water specified by the Secretary, a vessel crossing a river shall keep out of the way of a power-driven vessel ascending or descending the river.

Rule 15.a, states that in all waters, the give-way vessel is to avoid crossing ahead of the other vessel, the stand-on vessel.

Rule 15.b, requires a vessel crossing a river to keep out of the way of a power-driven ascending or descending vessel on the Western Rivers, Great Lakes, or other waters specified by the Secretary of the Department in which the Coast Guard is operating. This rule was added to the "crossing situation" as an admonishment to vessels such as ferries or other craft proceeding in a course line more or less perpendicular to a channel of a river to keep clear of that channel if a power-driven vessel is ascending or descending.

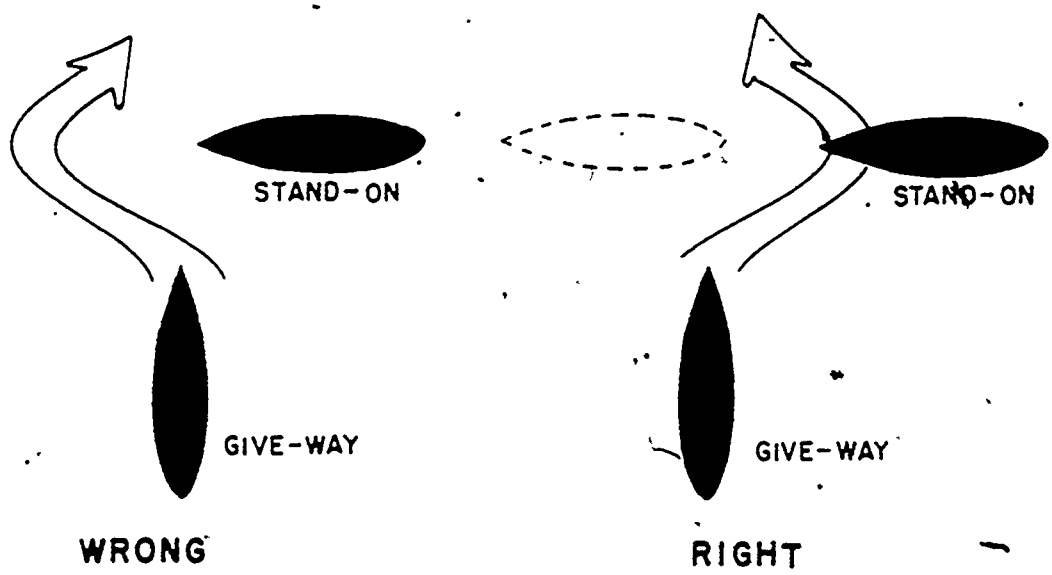


Figure 8.--Crossing.

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RULE 16

Action by Give-way Vessel

Every vessel which is directed to keep out of the way of another vessel shall, so far as possible. take early and substantial action to keep well clear.

RULE 17

Action by Stand-on Vessel

(a)(i) Where one of two vessels is to keep out of the way the other shall keep her course and speed.

(ii) The latter vessel may however take action to avoid collision by her maneuver alone, as soon as it becomes apparent to her that the vessel required to keep out of the way is not taking appropriate action in compliance with these Rules.

(b) When, from any cause, the vessel required to keep her course and speed finds herself so close that collision cannot be avoided by the action of the give-way vessel alone, she shall take such action as will best aid to avoid collision.

(c) A power-driven vessel which takes action in a crossing situation in accordance with sub-paragraph (a)(ii) of this Rule to avoid collision with another power-driven vessel shall, if the circumstances of the case admit, not alter course to port for a vessel on her own port side.

(d) This Rule does not relieve the give-way vessel of her obligation to keep out of the way.

Rule 17 provides the stand-on vessel with the flexibility to take early action to avoid collision "as soon as it becomes apparent" to her that the give-way vessel is not taking appropriate action.

The rule cautions the stand-on vessel not to alter course to port for a vessel on its own port side if the circumstances of the case permit. The rule does not relieve the give-way vessel of its obligation to keep out of the way.

RULE 18

Responsibilities Between Vessels

Except where Rules 9, 10 and 13 otherwise require:

(a) A power-driven vessel underway shall keep out of the way of:

(i) a vessel not under command;

(ii) a vessel restricted in her ability to maneuver;

(iii) A vessel engaged in fishing.

(iv) A sailing vessel.

(b) A sailing vessel underway shall keep out of the way of:

(i) A vessel not under command;

(ii) A vessel restricted in her ability to maneuver;

INTERNATIONAL	INLAND
(iii) a vessel engaged in fishing.	
(c) A vessel engaged in fishing when underway shall, so far as possible, keep out of the way of:	
(i) a vessel not under command;	
(ii) a vessel restricted in her ability to maneuver.	
(d)(i) Any vessel other than a vessel not under command or a vessel restricted in her ability to maneuver shall, if the circumstances of the case admit, avoid impeding the safe passage of a vessel constrained by her draft, exhibiting the signals in Rule 28.	
(ii) A vessel constrained by her draft shall navigate with particular caution having full regard to her special condition.	
(e) A seaplane on the water shall, in general, keep well clear of all vessels and avoid impeding their navigation. In circumstances, however, where risk of collision exists, she shall comply with the Rules of this Part.	(d) A seaplane on the water shall, in general, keep well clear of all vessels and avoid impeding their navigation. In circumstances, however, where risk of collision exists, she shall comply with the Rules of this Part.

INTERNATIONAL	INLAND

RULE 19

Conduct of Vessels in Restricted Visibility

(a) This Rule applies to vessels not in sight of one another when navigating in or near an area of restricted visibility.

(b) Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A power-driven vessel shall have her engines ready for immediate maneuver.

(c) Every vessel shall have due regard to the prevailing circumstances and conditions of restricted visibility when complying with Rules 4 through 10.

(d) A vessel which detects by radar alone the presence of another vessel shall determine if a close-quarters situation is developing and/or risk of collision exists. If so, she shall take avoiding action in ample time, provided that when such action consists of an alteration of course, so far as possible the following shall be avoided:

(i) an alternation of course to port for a vessel forward of the beam, other than for a vessel being overtaken,

(ii) an alternation of course towards a vessel abeam or abaft the beam.

(e) Except where it has been determined that a risk of collision does not exist, every vessel which hears apparently forward of her beam the fog signal of another vessel, or which cannot avoid a close-quarters situation with another vessel forward of her beam, shall reduce her speed to the minimum at which she can be kept on her course. She shall if necessary take all her way off and in any event navigate with extreme caution until danger of collision is over.

Rule 19(a) Restricted visibility rules apply not only when a vessel is in an area of restricted visibility, for example, a fog bank or smoke cloud, but also when it is near such an area. The key words are "not in sight of one another." When this phrase is considered together with Rules 34 and 35, it is clear that maneuvering signals are not to be used when vessels are not in sight of one another.

Rule 19(b) A vessel shall proceed at a "safe speed" appropriate for the condition of visibility. The first three criteria for defining the term "safe speed" are visibility, traffic density, and own ship maneuverability. Should any one of these three conditions be other than ideal, the vessel's speed must be adjusted accordingly. This can mean that in open waters, where traffic density is extremely light, full speed may be appropriate because, with no maneuvering restrictions, turning may be the best evasive maneuver. On the other hand, when traffic density increases or geographical constraints limit turning room, a severe speed reduction may be indicated.

The last sentence of Rule 19(b) says, in effect, that in restricted visibility, power-driven vessels, no matter where they are operating, must be ready to maneuver immediately.

Rule 19(c) refers to Subpart I. Mariners should be particularly mindful of existing visibility when considering or establishing the following: proper look-out, safe speed, risk of collision, action to be taken to avoid collision, conduct in narrow channels, and conduct in vessel traffic service areas.

These rules demand a more positive approach to the use of radar. Essentially, Rule 19(d) says that if you detect a vessel by radar, you shall determine if a close-quarters situation or risk of collision is developing.

If a close-quarters situation is developing, the mariner must take appropriate action to avoid collision in ample time. Rule 19(d)(i) requires that a port turn be avoided in the meeting and crossing situation where possible. It goes one step further in paragraph (d)(ii) and requires that a turn toward a vessel that is abeam or abaft the beam to be avoided where possible. It might appear that these two provisions conflict with one another; however, close study makes it evident that a conflict does not exist. In the execution of this Rule, the mariner must remember the duty under Rule 8(d), which provides that action taken to avoid collision be monitored until the other vessel is finally past and clear.

The last sentence in paragraph (e) directs the vessel to proceed at a minimum speed only, and, in some instances, to cease making way altogether. This might even include backing her engines.

PART C · Lights and Shapes

INTERNATIONAL	INLAND

RULE 20

Application

(a) Rules in this part shall be complied with in all weathers.

(b) The Rules concerning lights shall be complied with from SUNSET to SUNRISE, and during such times no other lights shall be exhibited, except such lights as cannot be mistaken for the lights specified in these Rules or do not impair their visibility or distinctive character, or interfere with the keeping of a proper look-out.

(c) The lights prescribed by these Rules shall, if carried, also be exhibited from SUNRISE to SUNSET in restricted visibility and may be exhibited in all other circumstances when it is deemed necessary.

(d) The Rules concerning shapes shall be complied with by day.

(e) The lights and shapes specified in these Rules shall comply with the provisions of Annex I to these Regulations.

Rule 20 requires running lights to be used in restricted visibility during daylight hours.

RULE 21

Definitions

(a) "Masthead light" - means a white light placed over the fore and aft centerline of the vessel showing an unbroken light over an arc of the horizon of 225 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on either side of the vessel.

RULE 21

Definitions

(a) "Masthead light" - means a white light placed over the fore and aft centerline of the vessel showing an unbroken light over an arc of the horizon of 225 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on either side of the vessel, except that on a vessel of less than 12 meters in length the masthead light shall be placed as nearly as practicable to the fore and aft centerline of the vessel.

Masthead light 225°

INTERNATIONAL	INLAND
(b) "Sidelights" - means a green light on the starboard side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on its respective side. In a vessel of less than 20 meters in length the side-lights may be combined in one lantern carried on the fore and aft centerline of the vessel.	(b) "Sidelights" - means a green light on the starboard side and a red light on the port side each showing an unbroken light over an arc of the horizon of 112.5 degrees and so fixed as to show the light from right ahead to 22.5 degrees abaft the beam on its repective side. On a vessel of less than 20 meters in length the side lights may be combined in one lantern carried on the fore and aft centerline of the vessel, except that on a vessel of less than 12 meters in length the sidelights when combined in one lantern shall be placed as nearly as practicable to the fore and aft centerline of the vessel.

Side light 112.5°

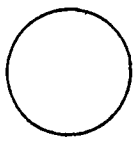
(c) "Sternlight" - means a white light placed as nearly as practicable at the stern showing an unbroken light over an arc of the horizon of 135 degrees and so fixed as to show the light 67.5 degrees from right aft on each side of the vessel.

Stern light 135°

(d) "Towing light" - means a yellow light having the same characteristics as the "sternlight" defined in paragraph (c) of this Rule.

Towing light 135°

(e) "All-round light." - means a light showing an unbroken light over an arc of the horizon of 360 degrees.



All round light 360°.

(f) "Flashing light" - means a light flashing at regular intervals at a frequency of 120 flashes or more per minute.

(g) "Special flashing light" means a YELLOW light flashing at regular intervals at a frequency of 50 to 70 flashes per minute, placed as far forward and as nearly as practicable on the fore and aft centerline of the tow and showing an unbroken light over an arc of the horizon of not less than 180 degrees nor more than 225 degrees and so fixed as to show the light from right ahead to abeam and no more than 22.5 degrees abaft the beam on either side of the vessel.

Rule 21 (f) contains an operating specification for a "flashing light." It is important to note that this type of light flashes at the extremely high rate of 120 flashes per minute so that it will not be confused with the special flashing lights (50-70 flashes per minute) used to mark a tow being pushed ahead. Under the new rules this flashing light is allowed only on air-cushioned vessels operating in their nondisplacement mode as per Rule 23(b).

Rule 21(g) provides for a "special flashing light." The purpose of the special flashing YELLOW light is to warn operators of small boats that a tow is approaching. The light could be confused with the lights on aids to navigation because of the 50-70 flashes per minute requirement; however, when this light is coupled with the towing lights of the tug, confusion should be minimized. In addition, the light is YELLOW in color, a color NOT used for aids to navigation.

RULE 22

Visibility of Lights

The lights prescribed in these Rules shall have an intensity as specified in Section 8 of Annex I to these Regulations so as to be visible at the following MINIMUM ranges:

(a) In vessels of 50 meters or more in length:

a masthead light, 6 miles;
a sidelight, 3 miles;
a sternlight, 3 miles;
a towing light 3 miles;
a white, red, green or yellow all-round light, 3 miles.

(b) In vessels of 12 meters or more in length but less than 50 meters in length:

a masthead light, 5 miles; except that where the length of the vessel is less than 20 meters, 3 miles,

a sidelight, 2 miles;
a stern light, 2 miles;
a towing light, 2 miles;
a white, red, green or yellow all-round light, 2 miles;

(c) In vessels of less than 12 meters in length:

a masthead light, 2 miles;
a sidelight, 1 mile;
a sternlight, 2 miles;
a towing light, 2 miles;
a white, red, green or yellow all-round light, 2 miles.

RULE 22

Visibility of Lights

The lights prescribed in these Rules shall have an intensity as specified in Annex I to these Rules, so as to be visible at the following MINIMUM ranges.

(a) In a vessel of 50 meters or more in length:

a masthead light, 6 miles;
a sidelight, 3 miles;
a sternlight, 3 miles;
a towing light, 3 miles;
a white, red, green or yellow all-round light, 3 miles;
a special flashing light, 2 miles.

(b) In a vessel of 12 meters or more in length but less than 50 meters in length:

a masthead light, 5 miles; except that where the length of the vessel is less than 20 meters, 3 miles;

a sidelight, 2 miles;
a sternlight, 2 miles;
a towing light, 2 miles;
a white, red, green or yellow all-round light, 2 miles;
a special flashing light, 2 miles.

(c) In a vessel of less than 12 meters in length:

a masthead light, 2 miles,
a sidelight, 1 mile;
a sternlight, 2 miles;
a towing light, 2 miles;
a white, red, green or yellow all-round light, 2 miles;
a special flashing light, 2 miles

INTERNATIONAL	INLAND
	(d) In an inconspicuous, partly submerged vessel or object being towed:
	a white all-round light 3 miles.
RULE 23	RULE 23
Power-driven Vessels Underway	Power-Driven Vessels Underway
(a) A power-driven vessel underway shall exhibit.	(a) A power-driven vessel underway shall exhibit:
(i) a masthead light forward;	(i) a masthead light forward; except that a vessel of less than 20 meters in length need not exhibit this light forward of amidships but shall exhibit it as far forward as is practicable;

(ii) a second masthead light abaft of and higher than the forward one, except that a vessel of less than 50 meters in length shall not be obliged to exhibit such light but MAY do so;

(iii) sidelights;

(iv) a sternlight.

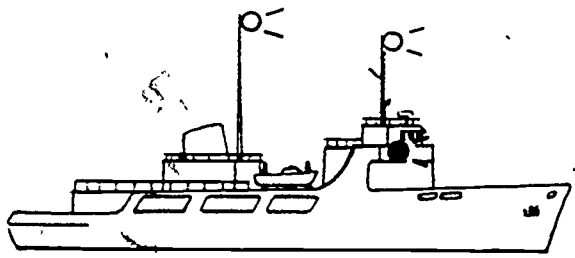


Figure 9.--Power-driven vessel underway - 50 meters or more in length (International-Inland)

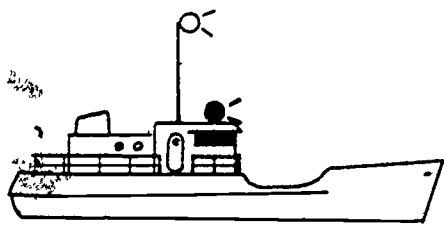


Figure 10.--Power-driven vessel underway - less than 50 meters in length (International-Inland)

(b) An air-cushion vessel when operating in the non-displacement mode shall, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit an all-round flashing YELLOW light.	(b) An air-cushion vessel when operating in the non-displacement mode shall, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit an all-round flashing YELLOW light where it can best be seen.

INTERNATIONAL	INLAND

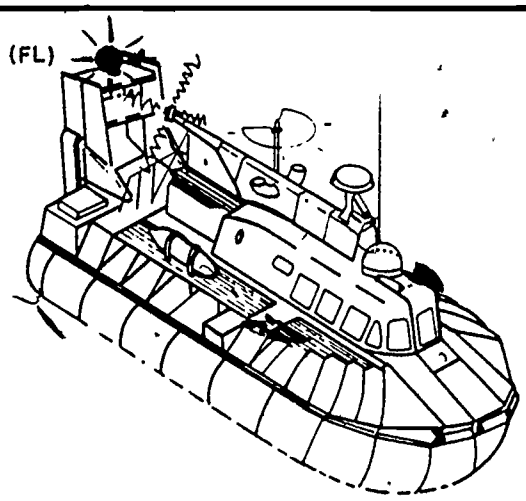


Figure 11.--Air-cushion vessel when operating in nondisplacement mode (International-Inland).

(c) A power-driven vessel of less than 7 meters in length and whose maximum speed does not exceed 7 knots may, in lieu of the lights prescribed in paragraph (a) of this Rule, exhibit an all-round white light. Such vessel shall, if practicable, also exhibit sidelights.

(c) A power-driven vessel of less than 12 meters in length may, in lieu of the lights prescribed in paragraph (a) of this Rule, exhibit an all-round white light and sidelights.

(d) A power-driven vessel when operating on the Great Lakes may carry an all-around white light in lieu of the second masthead light and stern light prescribed in paragraph (a) of this Rule. The light shall be carried in the position of the second masthead light and be visible at the same minimum range.

Power-driven vessels of all sizes and all of the "running lights" are now covered by this one Rule, as are the masthead or range lights, the sidelights, and sternlights for vessels underway under normal operations. Lights for special operations or special vessels are found in other Rules. Rule 23(d) permits all vessels to use an all-round 360° after masthead light when operating on the Great Lakes. Rule 23(d) limits the all-round light to power-driven vessels underway and does not permit its use to any of the other rules or any other classification of vessels.

RULE 24

Towing and Pushing

(a) A power-driven vessel when towing shall exhibit:

(i) instead of the light prescribed in Rule 23(a)(i), TWO masthead lights forward in a vertical line. When the length of the tow, measuring from the stern of the towing vessel to the after end of the tow exceeds 200 meters, THREE such lights in a vertical line;

RULE 24

Towing and Pushing

(a) A power-driven vessel when towing ASTERN shall exhibit:

(i) instead of the light prescribed either in Rule 23(a)(i) or 23(a)(ii), TWO masthead lights in a vertical line. When the length of the tow, measuring from the stern of the towing vessel to the after end of the tow exceeds 200 meters, THREE such lights in a vertical line;

INTERNATIONAL	INLAND
(ii) sidelights;	(ii) sidelights;
(iii) a sternlight;	(iii) a sternlight;
(iv) a towing light in a vertical line above the sternlight;	(iv) a towing light in a vertical line above the sternlight; and
(v) when the length of the tow exceeds 200 meters, a diamond shape where it can best be seen.	(v) when the length of the tow exceeds 200 meters, a diamond shape where it can best be seen.

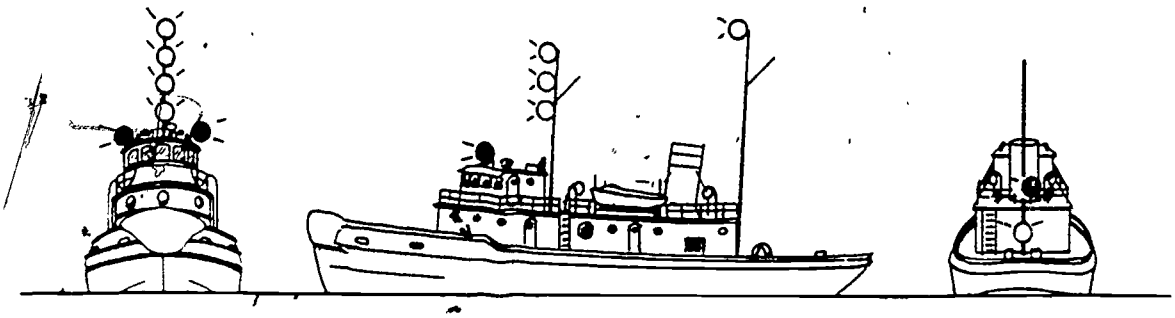


Figure 12.--Power-driven vessel 50 meters and upward in length towing ASTERN. Length of tow greater than 200 meters. (International and Inland)

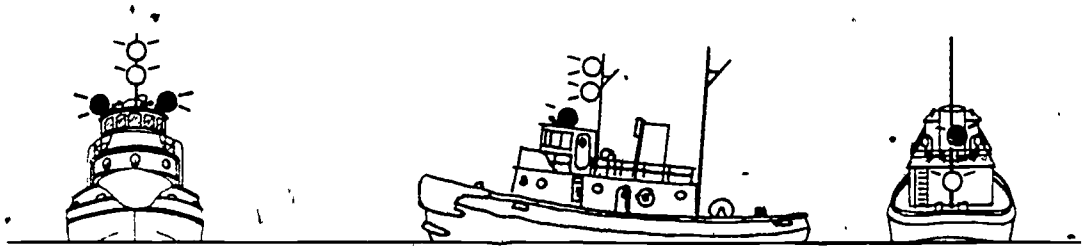


Figure 13.--Power-driven vessel LESS than 50 meters in length towing ASTERN. Length of tow LESS than 200 meters. (International and Inland)

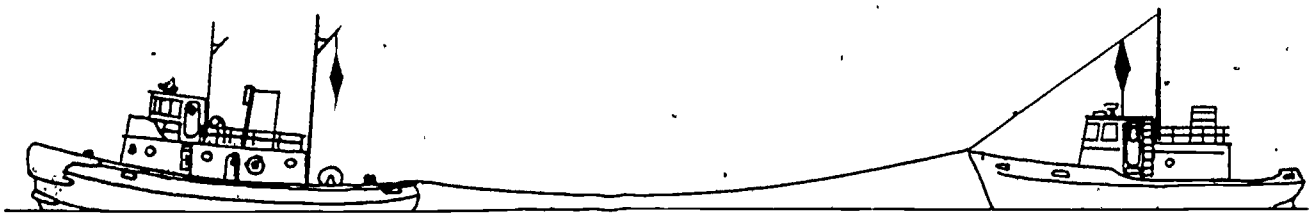


Figure 14.--Power-driven vessel towing astern by day. Length of tow greater than 200 meters. (International and Inland)

INTERNATIONAL	INLAND

(b) When a pushing vessel and a vessel being pushed AHEAD are rigidly connected in a composite unit they shall be regarded as a power-driven vessel and exhibit the lights prescribed in Rule 23

(c) A power-driven vessel when pushing ahead or towing alongside, except in the case of a composite unit, shall exhibit:

(i) instead of the light prescribed in Rule 23(a)(i), TWO masthead lights forward in a vertical line,

(ii) sidelights;

(iii) a sternlight

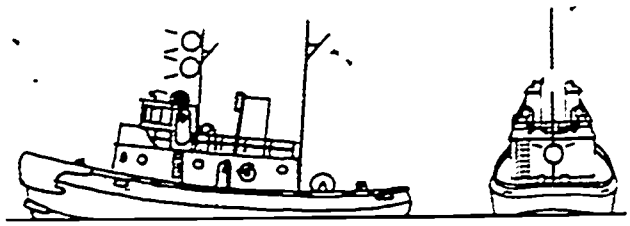


Figure 15.–Power-driven vessel pushing ahead or towing alongside. (International)

(d) A power-driven vessel to which paragraphs (a) and (c) of this Rule apply shall also comply with Rule 23(a)(ii).

(e) A vessel or object being towed shall exhibit.

(i) sidelights;

(ii) a sternlight;

(iii) when the length of the tow exceeds 200 meters, a diamond shape where it can best be seen.

(c) A power-driven vessel when pushing ahead or towing alongside, except as required by paragraphs (b) and (i) of this Rule, shall exhibit:

(i) instead of the light prescribed either in Rule 23(a)(i) or 23(a)(ii), TWO, masthead lights in a vertical line;

(ii) sidelights: and

(iii) Two towing lights in a vertical line.

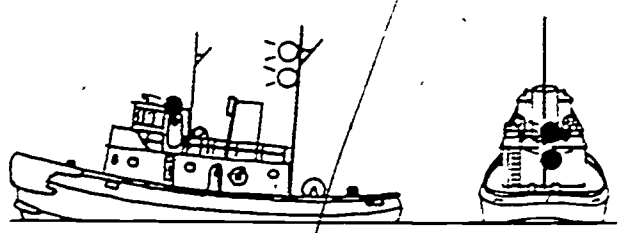


Figure 16.–Power-driven vessel pushing ahead or towing alongside. (Inland)

(d) A power-driven vessel to which paragraphs (a or (c) of this Rule apply shall also comply with Rule 23(a)(i) and 23(a)(ii).

(e) A vessel or object other than those referred to in paragraph (g) of this Rule being towed shall exhibit.

(i) sidelights;

(ii) a sternlight; and

(iii) when the length of the tow exceeds 200 meters, a diamond shape where it can best be seen.

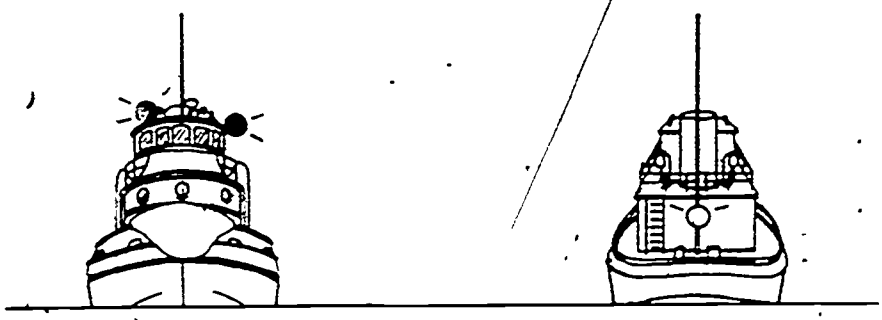


Figure 17.– A vessel being towed. (International and Inland)

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(f) Provided that any number of vessels being towed alongside or pushed in a group shall be lighted as one vessel.

(i) a vessel being pushed ahead, NOT being part of a composite unit, shall exhibit at the forward end, sidelights.

(ii) a vessel being towed alongside shall exhibit a sternlight and at the forward end, sidelights.

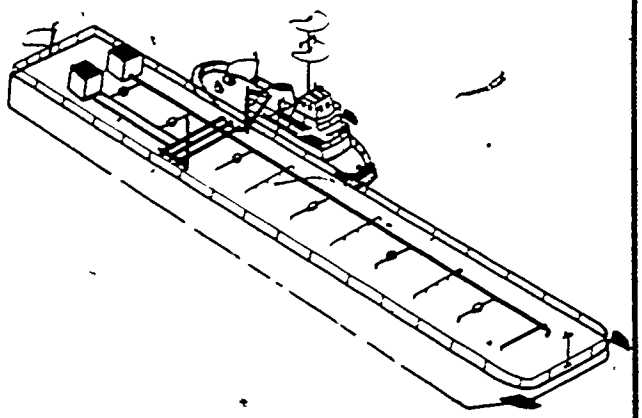

Figure 18. Towing alongside-towing vessel less than 50 meters in length. (International)

(g) Where from any sufficient cause it is impracticable for a vessel or object being towed to exhibit the lights prescribed in paragraph (e) of this Rule, all possible measures shall be taken to light the vessel or object towed or at least to indicate the presence of the unlighted vessel or object.

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(f) Provided that any number of vessels being towed alongside or pushed in a group shall be lighted as one vessel:

(i) A vessel being pushed ahead, not being part of a composite unit, shall exhibit at the forward end sidelights, and a special flashing light; and

(ii) a vessel being towed alongside shall exhibit a sternlight and at the forward end sidelights.

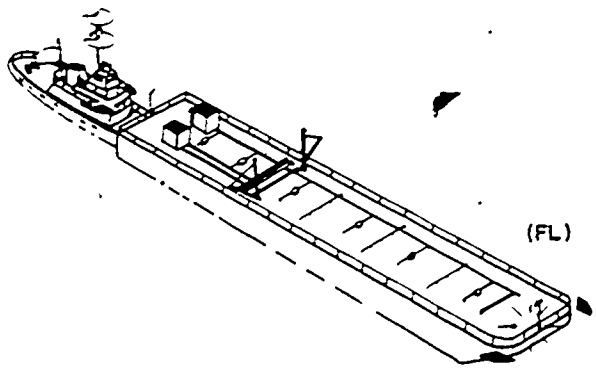

Figure 19.--Vessel being pushed ahead, not a part of a composit unit. (Inland)

(g) An inconspicuous, partly submerged vessel or object being towed shall exhibit.

(i) if it is less than 25 meters in breadth, one all-round white light at or near each end;

(ii) if it is 25 meters or more in breadth, four all-round white lights to mark its length and breadth;

(iii) If it exceeds 100 meters in length, additional all-round white lights between the lights prescribed in subparagraphs (i) and (ii) so that the distance between the lights shall not exceed 100 meters: Provided, that any vessels or objects being towed alongside each other shall be lighted as one vessel or object;

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(iv) a diamond shape at or near the aftermost extremity of the last vessel or object being towed; and

(v) The towing vessel may direct a searchlight in the direction of the tow to indicate its presence to an approaching vessel.

(h) Where from any sufficient cause it is impracticable for a vessel or object being towed to exhibit the lights prescribed in paragraph (e) or (g) of this Rule, all possible measures shall be taken to light the vessel or object towed or at least to indicate the presence of the unlighted vessel or object.

(i) Notwithstanding paragraph (c), on the Western Rivers and on waters specified by the Secretary, a power-driven vessel when pushing ahead or towing alongside, except as paragraph (b) applies, shall exhibit:

(i) sidelights; and
(ii) two towing lights in a vertical line.

(j) Where from any sufficient cause it is impracticable for a vessel not normally engaged in towing operations to display the lights prescribed by paragraph (a), (c) or (i) of this Rule, such vessel shall not be required to exhibit those lights when engaged in towing another vessel in distress or otherwise in need of assistance. All possible measures shall be taken to indicate the nature of the relationship between the towing vessel and the vessel being assisted. The searchlight authorized by Rule 36 may be used to illuminate the tow.

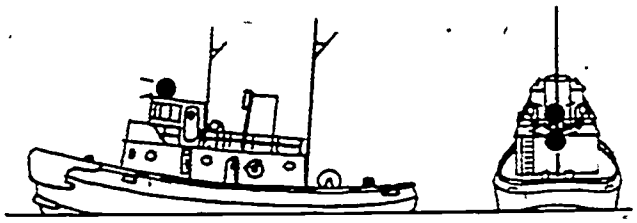

Figure 20.--Power-driven vessel pushing ahead or towing alongside. (Western Rivers)

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Sections (a)(i), (c)(i), and (d) of the Inland Rules permit the carrying of two or three white masthead lights on EITHER the forward or after mast. If the lights are carried forward, then a masthead light abaft and higher than the forward white masthead lights must be carried. If they are carried aft, then a forward 225° masthead light must be carried forward also. In either case, a "range" of white masthead lights show to other vessels the aspect of the towing vessel.

Marine technology has advanced to the stage where tugs and barges of specific design can be mechanically locked so rigidly in the pushing mode that they can successfully endure high seas operations. Rule 24(b) says this combination is to carry the lights of a conventional power-driven vessel.

When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit, they are regarded as a power driven vessel and must exhibit the lights under Rule 23. A "composite unit" is interpreted to be a pushing vessel that is rigidly connected by mechanical means to a vessel being pushed so they react to sea and swell as one vessel. "Mechanical means" does NOT include the following:

(a) Lines.
(b) Hawsers.
(c) Wires.
(d) Chains.

Rule 24(c)(iii) The International Rule does not require any distinctive stern lighting for vessels pushing ahead or towing alongside. The requirement of the Inland Rule to display two YELLOW towing lights eliminates the problem of an overtaking vessel's only seeing a white light and not appreciating the task in which the overtaken vessel is engaged. That could create an unsafe situation, especially in confined waters.

Rule 24(g) is not found in the International Rules. It has been added to prescribe lighting for towed objects which have no place for sidelights and a sternlight but to which an all-round light could be attached.

Rule 24(i) applies ONLY to the Western Rivers. It exempts vessels towing alongside or pushing ahead from the requirement to display ANY white masthead lights when on the Western Rivers.

Rule 24(j) was added because in distress situations the mariner cannot often comply with the rules for towing lights when the mariner is attempting to render assistance to another vessel.

RULE 25	RULE 25
Sailing Vessels Underway and Vessels Under Oars	Sailing Vessels Underway and Vessels Under Oars
a) A sailing vessel underway shall exhibit:	(a) A sailing vessel underway shall exhibit:
i) sidelights;	(i) sidelights; and
ii) a sternlight	(ii) a sternlight
b) In a sailing vessel of less than 12 meters in length the lights prescribed in paragraph (a) of this Rule may be combined in one lantern carried at or near the top of the mast where it can best be seen.	(b) In a sailing vessel of less than 20 meters in length the lights prescribed in paragraph (a) of this Rule may be combined in one lantern carried at or near the top of the mast where it can best be seen.

(c) A sailing vessel underway may, in addition to the lights prescribed in paragraph (a) of this Rule, exhibit at or near the top of the mast, where they can best be seen, TWO all-round lights in a vertical line, the upper being red and the lower green, but these lights shall not be exhibited in conjunction with the combined lantern permitted by paragraph (b) of this Rule.

Figure 21.--Sailing vessel underway. (International - Inland)

Figure 22.--Sailing vessel underway displaying optional running lights in combined lantern. (Less than 12 meters International - Less than 20 meters Inland)

Figure 23.--Sailing vessel underway displaying optional lights top of mast. (International - Inland)

(d)(i) A sailing vessel of less than 7 meters in length shall, if practicable, exhibit the lights prescribed in paragraph (a) or (b) of this Rule, but if she does not, she shall have ready at hand an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.

(ii) A vessel under oars may exhibit the lights prescribed in this Rule for sailing vessels, but if she does not, she shall have ready at hand an electric torch or lighted lantern showing a white light which shall be exhibited in sufficient time to prevent collision.

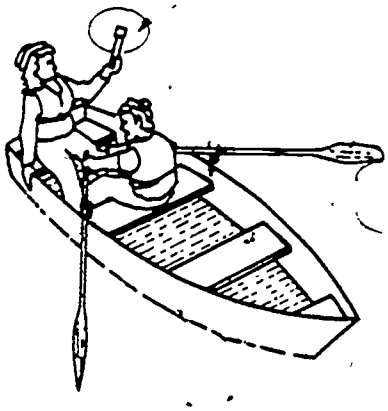

Figure 24.--Vessel under oars. (International - Inland)

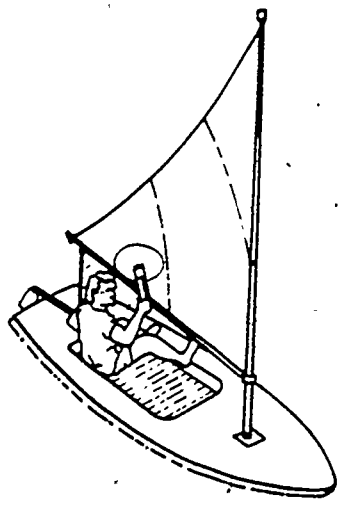

Figure 25.--Sailing vessel underway less than 7 meters in length. (International - Inland)

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e) A vessel proceeding under sail when also being propelled by machinery shall exhibit forward where it can best be seen a conical shape, apex downwards.	(e) A vessel proceeding under sail when also being propelled by machinery shall exhibit forward where it can best be seen a conical shape, apex downward. A vessel of less than 12 meters in length is not required to exhibit this shape, but may do so.

Figure 26 --Vessel proceeding by sail and machinery. (International - Inland. Shape is optional in inland waters for a vessel less than 12 meters in length)

In order to allow for better marking of sailing vessels which may be running heeled-over with one of the sidelights very close to the water or obsured by a sail, all-round red over green lights are permitted. These, however, may not be exhibited in conjuction with the combination lantern.

RULE 26

Fishing Vessels

a) A vessel engaged in fishing, whether underway or at anchor, shall exhibit ONLY the lights and shapes prescribed in this Rule.

b) A vessel when engaged in trawling, by which is meant the dragging through the water of a dredge net or other apparatus used as a fishing appliance, shall exhibit:

i) TWO all-round lights in a vertical line, the upper being green and the lower white, or a shape consisting of two cones with their apexes together in a vertical line one above the other. a vessel of less than 20 meters in length MAY instead of this shape exhibit a basket;

ii) A masthead light abaft of and higher than the all-round green light, a vessel of less than 50 meters in length shall not be obliged to exhibit such a light but MAY do so;

iii) When making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

INTERNATIONAL	INLAND

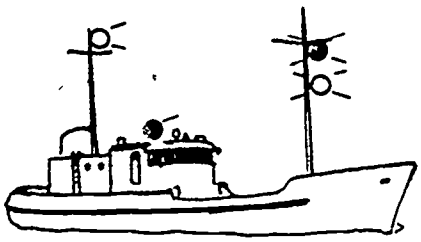


Figure 27.--Vessel greater than 50 meters in length and making way throught he water. (International - Inland)

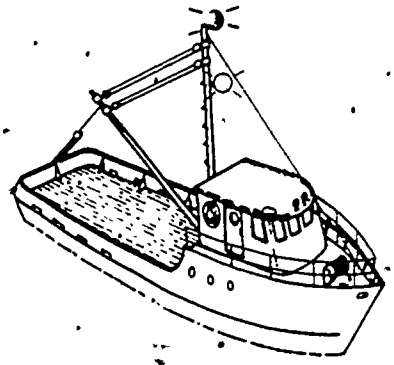


Figure 28.--Vessel less than 50 meters in length and not making way through the water. (International - Inland)

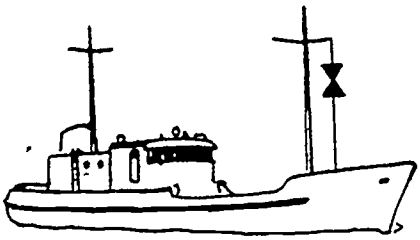


Figure 29.--Vessel greater than 20 meters in length, trawling. (International - Inland)

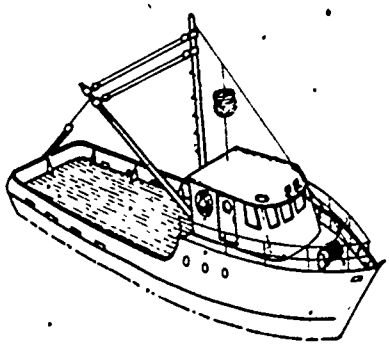


Figure 30.--Vessel less than 20 meters in length, trawling and displaying the OPTIONAL basket shape. (International - Inland)

(c) A vessel engaged in fishing, OTHER than trawling shall exhibit:

(i) TWO all-round lights in a vertical line, the upper being red and the lower white, or a shape consisting of two cones with apexes together in a vertical line one above the other, a vessel of less than 20 meters in length MAY instead of this shape exhibit a basket;

(ii) when there is outlying gear extending more than 150 meters horizontally from the vessel, an all-round white light or a cone apex upwards in the direction of the gear;

(iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

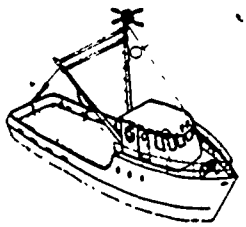


Figure 31.--Vessel engaged in fishing (except trawling) and not making way through the water. Displayed when underway and at anchor, and engaged in fishing (International - Inland)

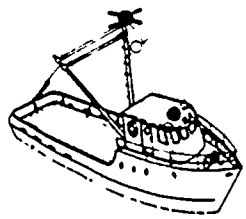


Figure 32.--Vessel engaged in fishing (not trawling) and making way through the water. (International - Inland)

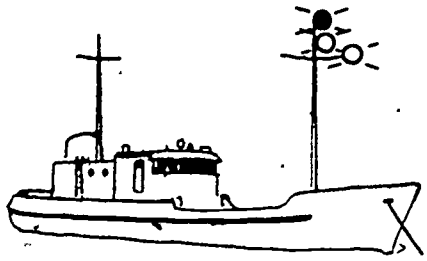


Figure 33.--Vessel anchored and engaged in fishing (not trawling). Outlying gear extending more than 150 meters into the seaway on the port side. (International - Inland)

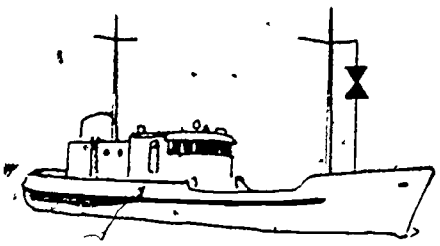


Figure 34.--Fishing vessel over 20 meters in length engaged in fishing. Displayed when underway and at anchor and engaged in fishing. (International - Inland)

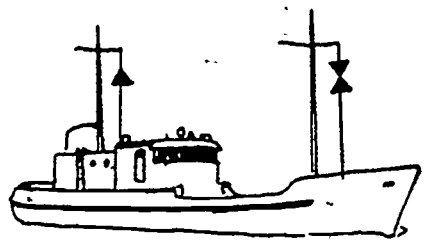


Figure 35.--Fishing vessel over 20 meters in length engaged in fishing with gear extending more than 150 meters horizontally into the seaway on the port side. Displayed when underway and at anchor and engaged in fishing. (International - Inland)

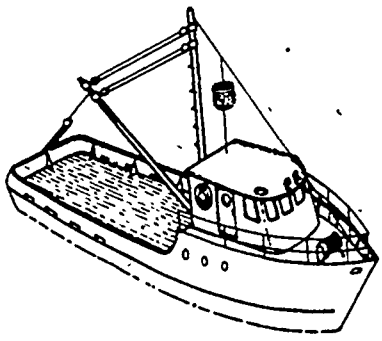


Figure 36.--Fishing vessel less than 20 meters in length engaged in fishing. Displayed when underway and at anchor and engaged in fishing.

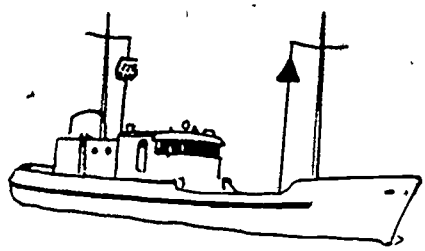


Figure 37.--Fishing vessel less than 20 meters in length engaged in fishing with gear extending more than 150 meters horizontally into the seaway on the starboard side. Displayed when underway and at anchor and engaged in fishing.

(d) A vessel engaged in fishing in close proximity to other vessels engaged in fishing MAY exhibit the additional signals described in Annex II to these Regulations.

(e) A vessel when not engaged in fishing shall not exhibit the lights or shapes prescribed in this Rule, but only those prescribed for a vessel of her length.

Vessels that fish in inland waters often fish upon the high seas. The new rule eliminates the variance in requirements and extends the application of the signal to all the waters of the United States and international waters.

RULE 27

Vessels Not Under Command or Restricted in their Ability to Maneuver

(a) A vessel not under command shall exhibit:

(i) TWO all-round red lights in a vertical line where they can best be seen;

(ii) TWO balls or similar shapes in a vertical line where they can best be seen;

(iii) when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

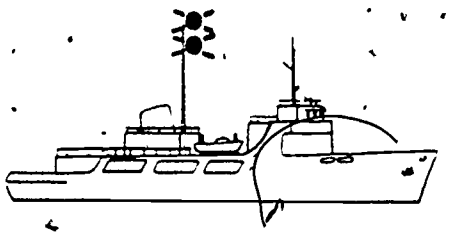


Figure 38.--Vessel not under command and not making way through the water. (International - Inland)

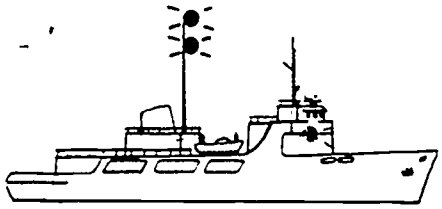


Figure 39.--Vessel not under command and making way through the water. (International - Inland)

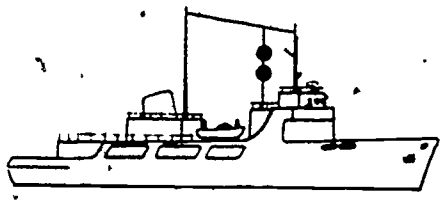


Figure 40.--Vessel underway and not under command. (International - Inland)

(b) A vessel restricted in her ability to maneuver, except a vessel engaged in minesweeping operations, shall exhibit:

(i) THREE all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white;

(ii) THREE shapes in vertical line where they can best be seen. The highest and lowest of these shapes shall be balls and the middle one a diamond;

(iii) when making way through the water, masthead lights, sidelights and a sternlight, in addition to the lights prescribed in subparagraph (i);

INTERNATIONAL	INLAND

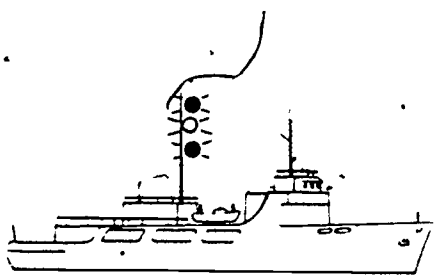


Figure 41.--Vessel restricted in her ability to maneuver and not making way through the water. (International - Inland)

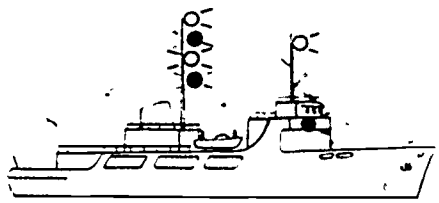


Figure 42.--Vessel restricted in her ability to maneuver and making way through the water. (International - Inland)

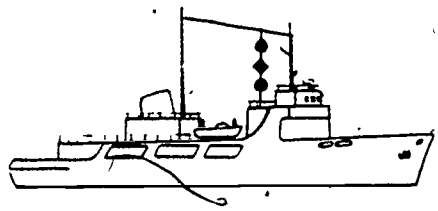


Figure 43.--Vessel restricted in her ability to maneuver, underway. When at anchor, the anchor ball must also be displayed. (International - Inland)

(iv) when at anchor, in ADDITION to the lights or shapes prescribed in subparagraphs (i) and (ii), the light, lights, or shape prescribed in Rule 30.

(c) A vessel engaged in a towing operation such as renders her unable to deviate from her course shall, in ADDITION to the lights or shapes prescribed in subparagraph (b)(i) and (ii) of this Rule, exhibit the lights or shape prescribed in Rule 24(a).

(d) A vessel engaged in dredging or underwater operations, when restricted in her ability to maneuver, shall exhibit the lights and shapes prescribed in paragraph (b) of this Rule and shall in addition, when an obstruction exists, exhibit:

(i) TWO all-round red lights or TWO balls in a vertical line to indicate the side on which the obstruction exists;

(ii) TWO all-round green lights or TWO diamonds in a vertical line to indicate the side on which another vessel may pass;

(iii) when making way through the water, in addition to the lights prescribed in this paragraph, masthead lights, sidelights and a sternlight,

(iv) a vessel to which this paragraph applies when at anchor shall exhibit the lights or shapes prescribed in subparagraphs (i) and (ii) INSTEAD of the lights or shape prescribed in Rule 30.

(c) A vessel engaged in a towing operation which severely restricts the towing vessel and her tow in their ability to deviate from their course shall, in ADDITION to the lights or shapes prescribed in subparagraphs (b)(i) and (ii) of this Rule, exhibit the lights or shape prescribed in Rule 24.

(d) A vessel engaged in dredging or underwater operations, when restricted in her ability to maneuver, shall exhibit the lights and shapes precribed in subparagraphs (b)(i), (ii), and (iii) of this Rule and shall in addition, when an obstruction exists, exhibit:

(i) TWO all-round red lights or TWO balls in a vertical line to indicate the side on which the obstruction exists;

(ii) TWO all-round green lights or TWO diamonds in a vertical line to indicate the side on which another vessel may pass; and

(iii) when at anchor, the lights or shapes prescribed by this paragraph, INSTEAD of the lights or shape prescribed in Rule 30 for anchored vessels.

INTERNATIONAL	INLAND

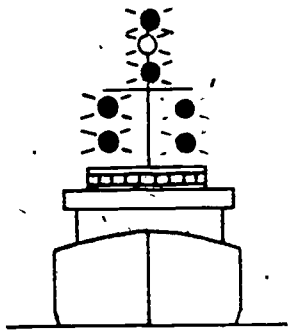


Figure 44.-- Vessel engaged in dredging or underwater operations when restricted in ability to maneuver - NOT making way. (International - Inland)

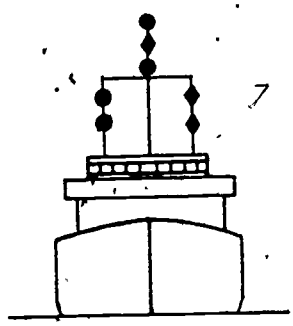


Figure 45.--Vessel engaged in dredging or underwater operations when restricted in ability to maneuver - underway and at anchor. (International - Inland)

(e) Whenever the size of a vessel engaged in diving operations makes it impracticable to exhibit the shapes prescribed in paragraph (d) of this Rule, a rigid replica of the International Code flag "A" not less than 1 meter in height shall be exhibited. Measures shall be taken to ensure all-round visibility.

(e) Whenever the size of a vessel engaged in diving operations makes it impracticable to exhibit all lights and shapes prescribed in paragraph (d) of the Rule, the following shall INSTEAD be exhibited:

(i) THREE all-round lights in a vertical line where they can best be seen. The highest and lowest of these lights shall be red and the middle light shall be white.

(ii) A rigid replica of the International Code flag "A" not less than 1 meter in height. Measures shall be taken to insure its all-round visibility.

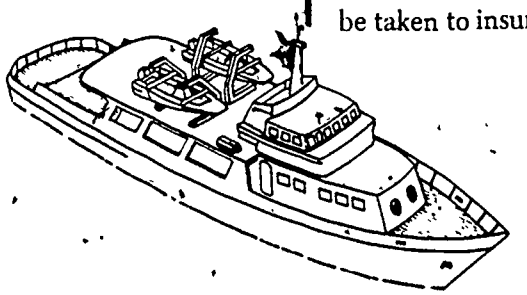


Figure 46.--Diving operations when the size of the vessel makes it impractical to exhibit the shapes in figure 45. (International - Inland)

(f) A vessel engaged in minesweeping operations shall, in ADDITION to the lights prescribed for a power-driven vessel in Rule 23, exhibit THREE all-round green lights or THREE balls. One of these lights or shapes shall be exhibited at or near the foremast head and one at each end of the fore yard. These lights or shapes indicate that it is dangerous for another vessel to approach closer than 1,000 meters astern or 500 meters on either side of the minesweeper.

INTERNATIONAL	INLAND

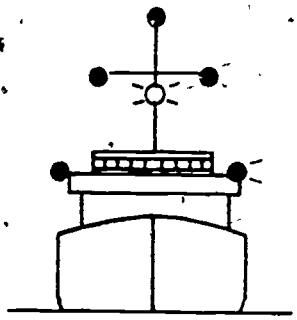


Figure 47.--Vessel less than 50 meters in length engaged in minesweeping operations. (International - Inland)

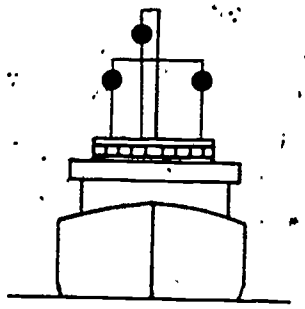


Figure 48.--Vessel engaged in minesweeping operations. (International - Inland)

(g) Vessels of less than 7 meters in length shall not be required to exhibit the lights prescribed in this Rule.

(g) A vessel of less than 12 meters in length, except when engaged in diving operations, is not required to exhibit the lights or shapes prescribed in this Rule.

(h) The signals prescribed in this Rule are not signals of vessels in distress and requiring assistance. Such signals are contained in Annex IV to these Regulations.

(h) The signals prescribed in this Rule are not signals of vessels in distress and requiring assistance. Such signals are contained in Annex IV to these Rules.

It should be noted that there is a difference between the lights and shapes that are to be displayed when vessels ARE AT ANCHOR and are "restricted in ability to maneuver" or are "engaged in dredging or underwater operations." A vessel that is restricted in her ability to maneuver and is at anchor must display the red-white-red lights PLUS the anchor lights for a vessel of her class (length) at night, and by day she must display the ball-diamond-ball PLUS the regular anchor ball. When a vessel is engaged in dredging or underwater operations and is at anchor, she displays ONLY the lights and shapes for that operation and does NOT display the anchor lights for a vessel of her class or the regular anchor ball.

Rule 27(c) requires a towing vessel engaged in difficult or severely restricted towing operations to show, in addition to its towing lights, the lights or shapes for a vessel restricted in its ability to maneuver. It is not intended to be used by vessels engaged in routine towing operations to declare that they are restricted in their ability to deviate from course.

Rule 27(f) addresses minesweepers and requires that the masthead signal and both yard arm signals be shown at all times during sweeping operations, even if sweeping is only conducted from one side.

Rule 28

Vessels Constrained by their Draft

A vessel constrained by her draft MAY, in ADDITION to the lights prescribed for power-driven vessels in Rule 23, exhibit where they can best be seen THREE all-round red lights in a vertical line, or a cylinder.

RULE 28

(Reserved)

INTERNATIONAL	INLAND

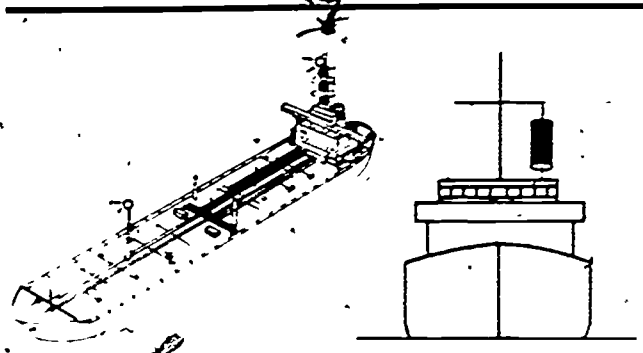


Figure 49.--Vessel constrained by draft. International

A vessel may display the lights and shape to inform other vessels that, because of her draft in relation to the available depth of water, she is severely restricted in her ability to deviate from the course she is following, ONLY in international waters.

RULE 29

Pilot Vessels

(a) A vessel engaged on pilotage duty shall exhibit:

(i) at or near the masthead, TWO all-round lights in a vertical line, the upper being white and the lower red.

(ii) when underway, in ADDITION, sidelights and a sternlight;

(iii) when at anchor, in ADDITION to the lights prescribed in subparagraph (i), the anchor light, lights or shape.

(b) A pilot vessel when not engaged on pilotage duty shall exhibit the lights or shapes prescribed for a similar vessel of her length.

(iii) when at anchor, in ADDITION to the lights prescribed in subparagraph (i), the anchor light, lights, or shape prescribed in Rule 30 for anchored vessels.

(b) A pilot vessel when not engaged on pilotage duty shall exhibit the lights or shapes prescribed for a vessel of her length.

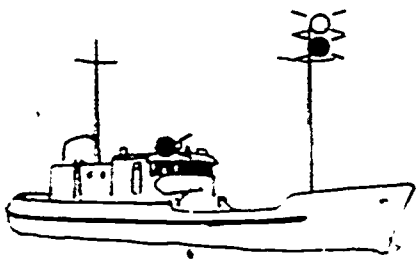


Figure 50.--Pilot vessel on pilotage duty and underway. (International - Inland)

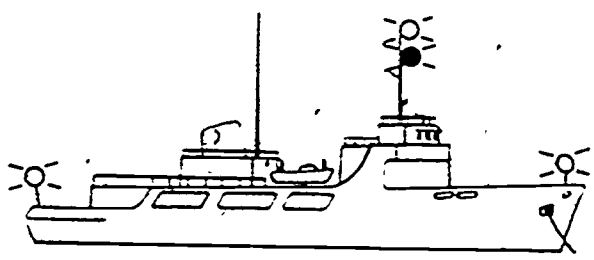


Figure 51.--Pilot vessel, 50 meters or more in length on pilotage duty and anchored. (International - Inland)

INTERNATIONAL	INLAND

The International and Inland Rule are essentially the same except that a provision has been added in Rule 30 Inland Rules, recognizing the fact that pilot vessels may anchor in special anchorage areas where lights and shapes are not required. There is no dayshape for a pilot vessel underway by day. Many pilot vessels have black hulls with the word, "PILOT" painted in a contrasting color on the side of the hull.

RULE 30

Anchored Vessels and Vessels Aground

a) A vessel at anchor shall exhibit where it can best be seen.

i) in the fore part, an all-round white light or one ball.

ii) at or near the stern and at a lower lever than the light prescribed in subparagraph i), an all-round white light

b) A vessel of less than 50 meters in length MAY exhibit an all-round white light where it can best be seen INSTEAD of the lights prescribed in paragraph a) of this Rule.

c) A vessel at anchor MAY, and a vessel of 100 meters and more in length SHALL, also use the available working or equivalent lights to illuminate her decks.

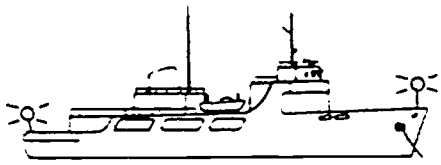


Figure 52.--Vessel 50 meters or more in length at anchor. International - Inland)

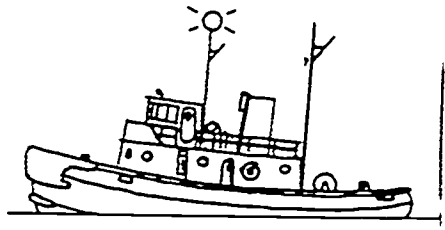


Figure 53.--Vessel less than 50 meters in length at anchor (International - Inland)

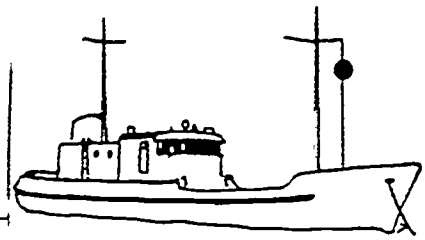


Figure 54.--Vessel at anchor.

d) A vessel aground shall exhibit the lights prescribed in paragraph a) or b) of this Rule and in ADDITION, where they can best be seen.

i) TWO all-round red lights in a vertical line.

ii) THREE balls in a vertical line.

d) A vessel aground shall exhibit the lights prescribed in paragraph a) or b) of this Rule and in ADDITION, if practicable, where they can best be seen:

i) TWO all-round red lights in a vertical line, and

ii) THREE balls in a vertical line

INTERNATIONAL	INLAND

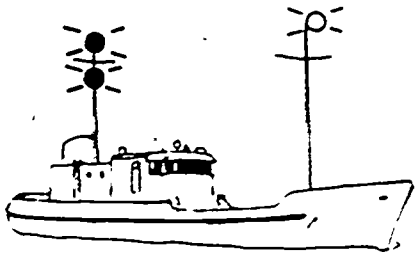


Figure 55.--Vessel less than 50 meters in length aground International - Inland)

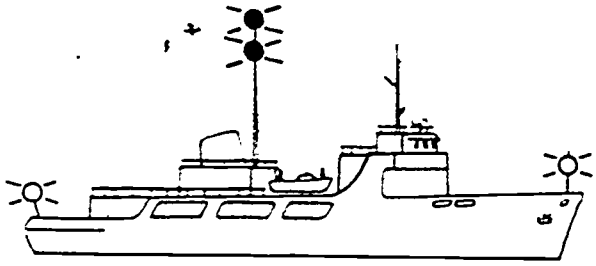


Figure 56.--Vessel over 50 meters in length aground (International - Inland)

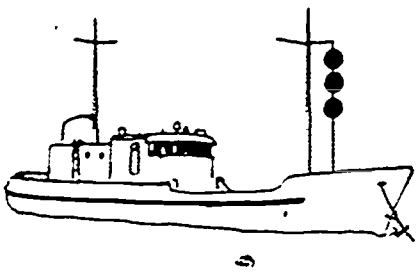


Figure 57.--Vessel aground (International - Inland).

NOTE: In certain cases vessels less than 20, 12 and 7 meters in length are not required to display any of these lights or shapes. See Rule 30(e)(f)(g).

(e) A vessel of less than 7 meters in length, when at anchor or aground, NOT near a narrow channel, fairway or anchorage, or where other vessels normally navigate, shall NOT be required to exhibit the lights or shapes prescribed in paragraphs (a), (b), or (d) of this Rule.

(e) A vessel of less than 7 meters in length, when at anchor, NOT in or near a narrow channel, fairway, anchorage, or where other vessels normally navigate, shall NOT be required to exhibit the lights or shape prescribed in paragraphs (a) and (b) of this Rule.

(f) A vessel of less than 12 meters in length when aground shall NOT be require to exhibit the lights or shapes prescribed in subparagraphs (d)(i) and (ii) of this Rule.

(g) A vessel of less than 20 meters in length, when at anchor in a special anchorage area designated by the Secretary, shall NOT be required to exhibit the anchor lights and shapes required by this Rule.

If a vessel is less than 50 meters in length, the anchor light no longer needs to be in the forward part. It can now be placed where it can best be seen. Anchored vessels do NOT include barges moored to a bank or dock. Lights for these vessels are found in Annex V of the Inland Rules. Rule 30(c) permits the use of deck lights to further illuminate an anchored vessel and is mandatory for a vessel 100 meters or more in length.

RULE 31

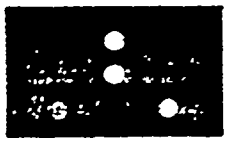
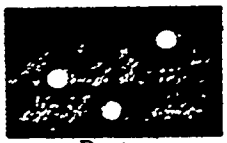
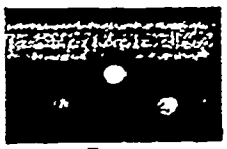
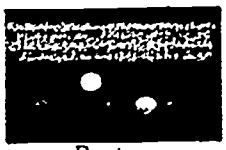
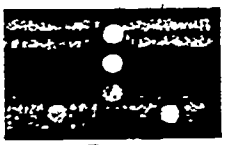
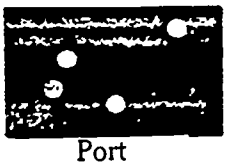
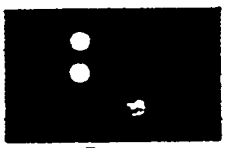
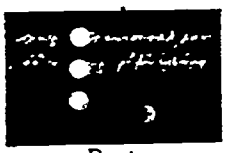
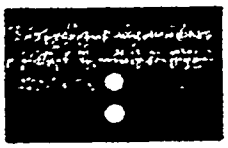
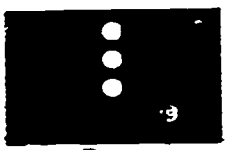
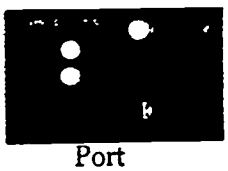
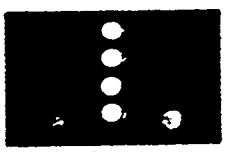
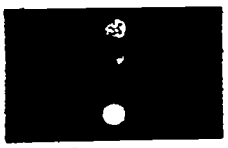
Seaplanes

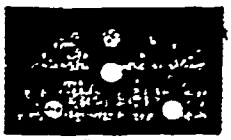
Where it is impracticable for a seaplane to exhibit lights and shapes of the characteristics or in the positions prescribed in the Rules of this Part she shall exhibit lights and shapes as closely similar in characteristics and position as is possible.

Seaplanes are required to exhibit lights and shapes as best they can. This rule acknowledges the fact that seaplanes are defined as vessels when waterborne.

Table 1. Summary of Navigational Lights and Shapes

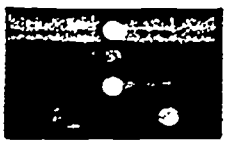
International or Inland

 Bow  Port	Power-driven vessel 50 meters or longer
 Bow  Port	Power-driven vessel less than 50 meters
 Bow  Port	Air-cushion vessel in non-displacement mode-flashing yellow light
 Port  Stern	Vessel less than 50 meters with length of tow 200 meters or less
 Port  Stern	Vessel less than 50 meters with length of tow over 200 meters
 Bow  Port	Vessel 50 meters or more with length of tow 200 meters or less
 Bow  Port	Vessel 50 meters or more with length of tow over 200 meters
 Bow  Stern	Sailing vessel (displaying optional mast lights)



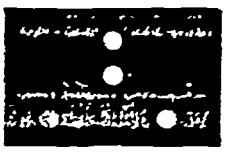
Bow Port

Vessel less than 50 meters, underway-trawling



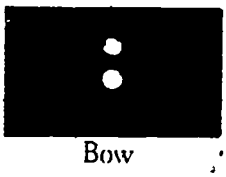
Bow Port

Vessel 50 meters or more, underway-trawling



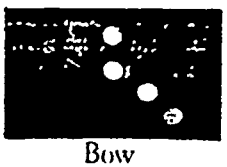
Bow Port

Vessel fishing, underway-making way



Bow Port

Vessel fishing, under-way not making way or at anchor

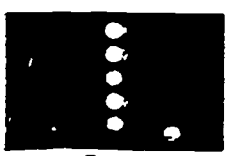


Bow Port

Vessel fishing with gear extending more than 150 meters to port, underway-making way

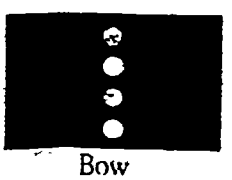
Bow Port

Vessel not under command, making way



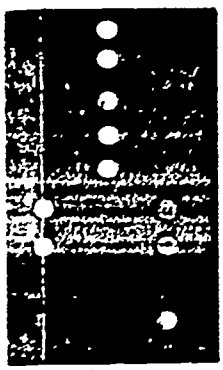
Bow Port

Vessel restricted in ability to maneuver, making way (except minesweeping)

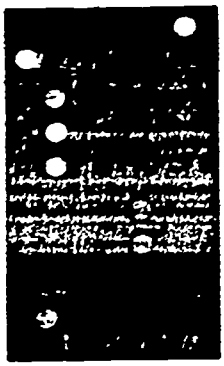


Bow Port

Vessel 50 meters or more, restricted in ability to maneuver, at anchor

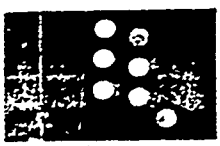


Bow

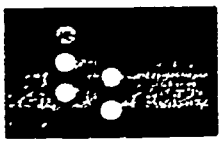


Port

Vessel engaged in dredging or underwater operations, when restricted in ability to maneuver, underway-making way

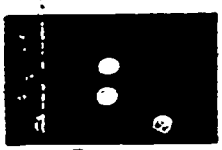


Bow



Stern

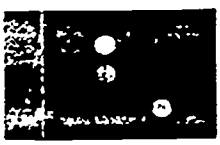
Vessel less than 50 meters with length of tow over 200 meters, making way-unable to deviate from her course



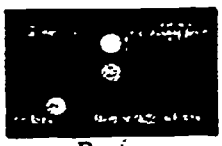
Bow

Port

Vessel engaged in minesweeping

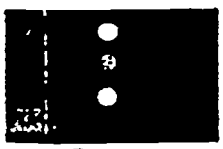


Bow

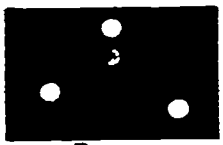


Port

Pilot vessel, underway

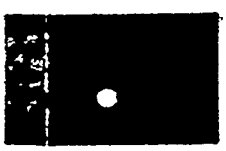


Bow

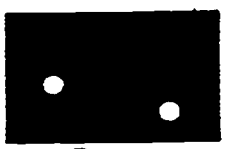


Port

Pilot vessel, at anchor



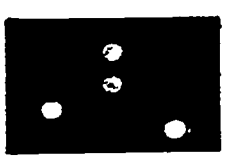
Bow



Port

Vessel 50 meters or more at anchor

Bow



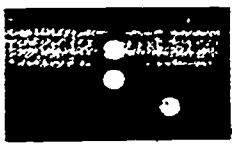
Port

Vessel 50 meters or more, aground

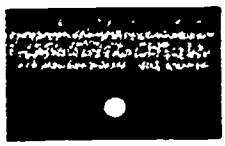
Bow

Bow

Power driven vessel less than 7 meters (side lights are carried if practical)

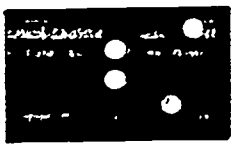


Port

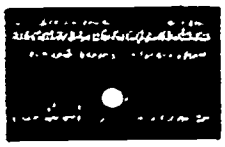


Stern

Vessel less than 50 meters pushing ahead or towing alongside



Port



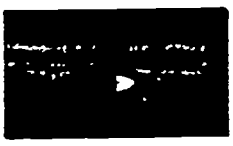
Stern

Vessel 50 meters or more pushing ahead or towing alongside

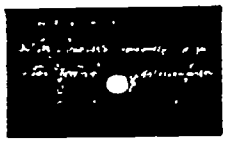
Bow

Port

Vessel being pushed ahead, not part of a composite unit



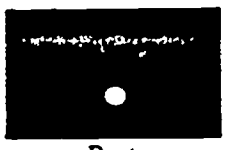
Bow



Stern

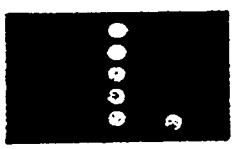
Sailing vessel less than 12 meters displaying running lights in optional lantern

Bow

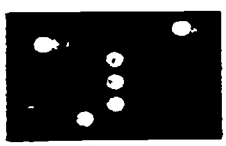


Port

Sailing vessel less than 7 meters and vessel under oars, underway (side lights not practical - International or Inland)

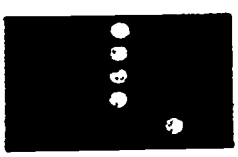


Bow

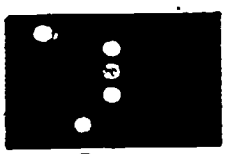


Port

Vessel 50 meters or more constrained by draft



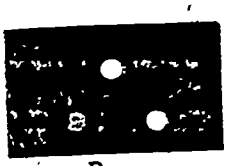
Bow



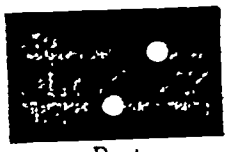
Port

Vessel less than 50 meters constrained by draft

INLAND

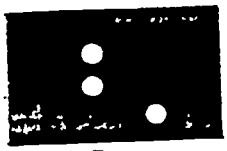


Bow

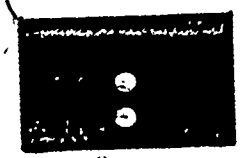


Port

Power-driven vessel less than 12 meters (sidelights may be combined in a lantern)

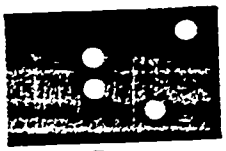


Port

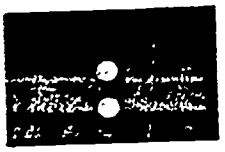


Stern

Vessels less than 50 meters pushing ahead or towing alongside

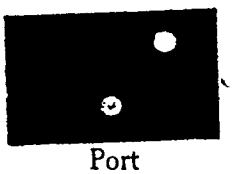


Port

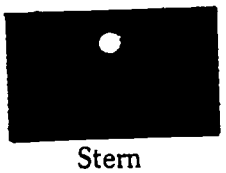


Stern

Vessel 50 meters or more pushing ahead or towing alongside

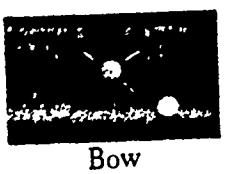


Port

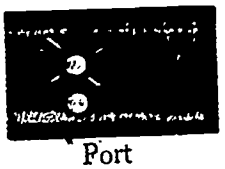


Stern

Power-driven vessel operating on Great Lakes displaying optional all-round light in lieu of second masthead and stern light



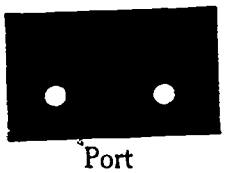
Bow



Port

Vessel being pushed ahead (not a part of a composite unit) (flashing yellow light)

Bow



Port

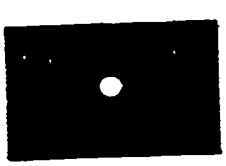
Inconspicuous, partly submerged vessel or object being towed, 25 meters or more in breadth (one light in each corner)

Bow

Stern

Power-driven vessel pushing ahead or towing alongside on Western Rivers (not part of a composite unit).

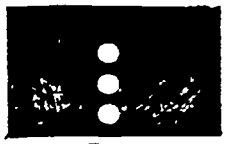
Bow

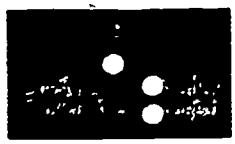


Stern

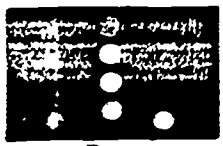
Sailing vessel less than 20 meters displaying running lights in optional lantern

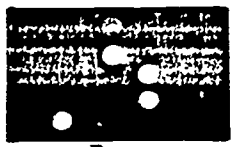
Optional Signals for Fishing Vessels Fishing in Close Proximity



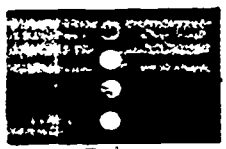


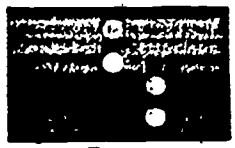
Trawler shooting nets-not making way





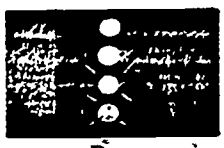
Trawler hauling nets-making way

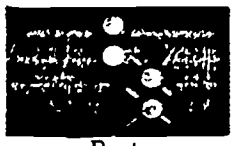




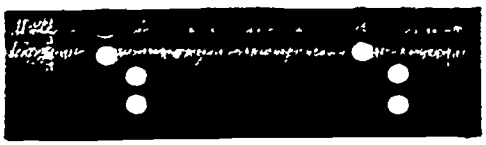
Trawler with nets fast on obstruction-not making way

Purse seiner with nets out-making way (alternate flashing yellow)



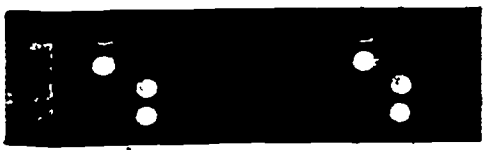


Purse seiner stopped with nets out (alternate flashing yellow)



Pair trawling and shooting nets-not making way

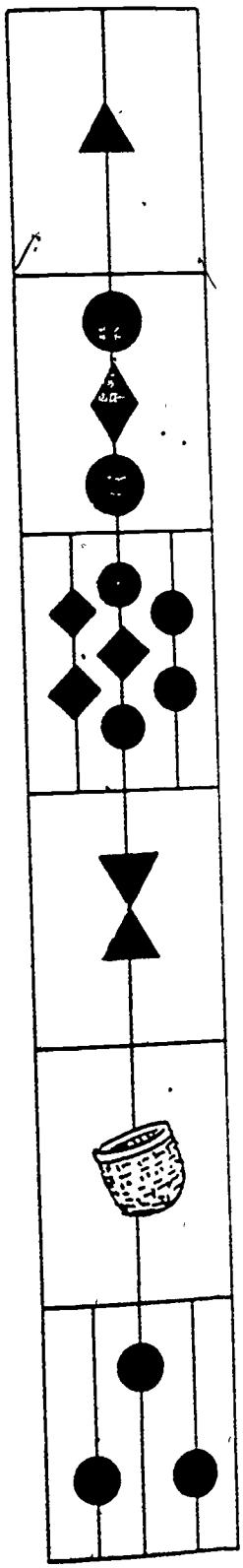
Pair trawling, hauling nets-making way



Pair trawling, nets fast on an obstruction-not making way

SHAPES

International or Inland



Fishing gear extending more than 150 meters horizontally from vessel

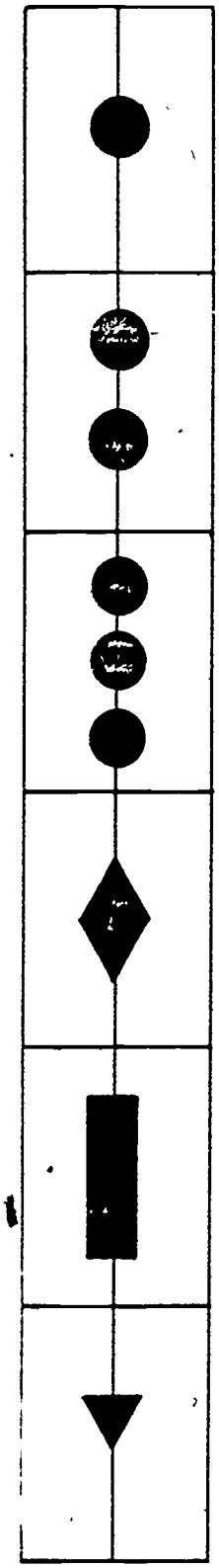
Vessel restricted in ability to maneuver

Vessel engaged in dredging or underwater operations, when restricted in ability to maneuver

Vessel engaged in fishing/trawling

Vessel engaged in fishing/trawling (optional shape for vessel less than 20 meters in length)

Vessel engaged in minesweeping operations



Vessel at anchor

Vessel not under command

Vessel aground

Vessel towing and vessel being towed when length of tow exceeds 200 meters

Vessel constrained by draft (International waters only)

Vessel under sail when also being propelled by machinery

PART D - Sound and Light Signals

INTERNATIONAL | INLAND

RULE 32

Definitions

(a) The word "whistle" means any sound signalling appliance capable of producing the prescribed blasts and which complies with the specifications in Annex III to these Regulations.

(b) The term "short blast" means a blast of about one second's duration.

(c) The term "prolonged blast" means a blast of from four to six second's duration.

Rule 32 requires that the sound signalling appliance be able to produce sounds in compliance with certain defined technical requirements contained in Annex III.

RULE 33

Equipment for Sound Signals

(a) A vessel of 12 meters or more in length shall be provided with a whistle and a bell and a vessel of 100 meters or more in length shall, in addition, be provided with a gong, the tone and sound of which cannot be confused with that of the bell. The whistle, bell and gong shall comply with the specifications in Annex III to these Regulations. The bell or gong or both may be replaced by other equipment having the same respective sound characteristics, provided that manual sounding of the required signals shall always be possible.

(b) A vessel of less than 12 meters in length shall not be obliged to carry the sound signalling appliances prescribed in paragraph (a) of this Rule but if she does not, she shall be provided with some other means of making an efficient sound signal.

Rule 33 requires that the sound signalling devices comply with the specifications contained in Annex III. It also states that the devices on vessels less than 12 meters long will not be required to conform to the standards required of longer vessels.

INTERNATIONAL

RULE 34

Maneuvering and Warning Signals

(a) When vessels are in sight of one another, a power-driven vessel underway, when maneuvering as authorized or required by these Rules, shall indicate that maneuver by the following signals on her whistle:

INLAND

RULE 34

Maneuvering and Warning Signals

(a) When power-driven vessels are in sight of one another and meeting or crossing at a distance within half a mile of each other, each vessel underway, when maneuvering as authorized or required by these Rules:

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INTERNATIONAL	INLAND
one short blast to mean "I am altering my course to starboard":	(i) shall indicate that maneuver by the following signals on her whistle: one short blast to mean "I intend to leave you on my port side"; two short blasts to mean "I intend to leave you on my starboard side"; and three short blasts to mean "I am operating astern propulsion".
two short blasts to mean "I am altering my course to port":	
three short blasts to mean "I am operating astern propulsion.	(ii) upon hearing the one or two blast signal of the other shall, if in agreement, sound the same whistle signal and take the steps necessary to effect a safe passing. If, however, from any cause, the vessel doubts the safety of the proposed maneuver, she shall sound the danger signal specified in paragraph (d) of this Rule and each vessel shall take appropriate precautionary action until a safe passing agreement is made.
(b) Any vessel may supplement the whistle signals prescribed in paragraph (a) of this Rule by light signals, repeated as appropriate. Whilst the maneuver is being carried out:	(b) A vessel may supplement the whistle signals prescribed in paragraph (a) of this Rule by light signals:
(i) These light signals shall have the following significance:	(i) These signals shall have the following significance: one flash to mean "I intend to leave you on my port side"; two flashes to mean "I intend to leave you on my starboard side"; three flashes to mean "I am operating astern propulsion";
one flash to mean "I am altering my course to starboard":	
two flashes to mean "I am altering my course to port":	
three flashes to mean "I am operating astern propulsion";	
(ii) the duration of each flash shall be about one second, the interval between flashes shall be about one second, and the interval between successive signals shall be not less than ten seconds;	(ii) The duration of each flash shall be about 1 second; and
(iii) the light used for this signal shall, if fitted, be an all-round white light, visibile at a minimum range of 5 miles, and shall comply with the provisions of Annex I.	(iii) The light used for this signal shall, if fitted, be one all-round white or yellow light, visibile at a minimum range of 2 miles, synchronized with the whistle, and shall comply with the provisions of Annex I to these Rules.
(c) When in sight of one another in a narrow channel or fairway:	(c) When in sight of one another:

INTERNATIONAL	INLAND
(i) A vessel intending to overtake another shall in compliance with Rule 9(e)(i) indicate her intention by the following signals on her whistle. two prolonged blasts followed by one short blast to mean "I intend to overtake you on your starboard side"; two prolonged blasts followed by two short blasts to mean "I intend to overtake you on your port side".	(i) A power-driven vessel intending to overtake another power-driven vessel shall indicate her intention by the following signals on her whistle. one short blast to mean "I intend to overtake you on your starboard side", two short blasts to mean "I intend to overtake you on your port side", and
(ii) the vessel about to be overtaken when acting in accordance with Rule 9(e)(i) shall indicate her agreement by the following signal on her whistle. one prolonged, one short, one prolonged and one short blast, in that order.	(ii) the power-driven vessel about to be overtaken shall, if in agreement, sound a similar sound signal. If in doubt she shall sound the danger signal prescribed in paragraph (d).

(d) When vessels in sight of one another are approaching each other and from any cause either vessel fails to understand the intentions or actions of the other, or is in doubt whether sufficient action is being taken by the other to avoid collision, the vessel in doubt shall immediately indicate such doubt by giving at least five short and rapid blasts on the whistle. Such signal may be supplemented by a light signal of at least five short and rapid flashes.

(e) A vessel nearing a bend of an area of a channel or fairway where other vessels may be obscured by an intervening obstruction shall sound one prolonged blast. Such signal shall be answered with a prolonged blast by any approaching vessel that may be within hearing around the bend or behind the intervening obstruction

(f) If whistles are fitted on a vessel at a distance apart of more than 100 meters, one whistle only shall be used for giving maneuvering and warning signals.

(g) When a power-driven vessel is leaving a dock or berth, she shall sound one prolonged blast.

(h) A vessel that reaches agreement with another vessel in a meeting, crossing, or overtaking situation by using the radiotelephone as prescribed by the Bridge-to-Bridge Radio-telephone Act (85 Stat. 165; 33 U.S.C. 1207), is not obliged to sound the whistle signals prescribed by this Rule, but may do so. If agreement is not reached then whistle signals shall be exchanged in a timely manner and shall prevail.

This Rule differs in international and inland waters. The principal difference is that in international waters the signals are "signals of action" and in inland waters the signals are "signals of intent and reply."

Rule 34(b) allows the use of light signals to supplement the whistle signal. This is an additional safety factor meant to assist mariners in identifying the vessel signalling and the signal given.

Rule 34(c) in international waters requires the overtaking signals in a narrow channel or fairway, while in inland waters you are required to sound the overtaking signals on open water as well as in narrow channels and fairways even if the overtaken vessel does not have to maneuver. The signal in inland waters (one or two short blasts) is more concise than the international signal (two prolonged and one or two short blasts).

Rule 34(d) is the danger signal and it is the same in international and inland waters. Under this Rule the danger signal must be given by any vessel in doubt about the actions or intentions of an approaching vessel, if the vessels are in sight of one another.

Rule 34(g) is an Inland Rule only and requires vessels leaving a dock or berth to sound one prolonged blast. This is considered a prudent and precautionary action that announces the maneuver to other vessels in the area.

Rule 34(h) sanctions the use of bridge-to-bridge radiotelephone to reach an agreement on passing rather than exchanging whistle signals. Whistle signals are required if for any reason an agreement cannot be reached by radiotelephone.

RULE 35

Sound Signals in Restricted Visibility

In or near an area of restricted visibility, whether by day or night, the signals prescribed in this Rule shall be used as follows:

(a) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.

(b) A power-driven vessel underway but stopped and making no way through the water shall sound at intervals of not more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them.

(c) A vessel not under command, a vessel restricted in her ability to maneuver, a vessel constrained by her draft, a sailing vessel, a vessel engaged in fishing and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in paragraphs (a) or (b) of this Rule, sound at intervals of not more than 2 minutes three blasts in succession, namely one prolonged followed by two short blasts.

(c) A vessel not under command, a vessel restricted in her ability to maneuver, whether underway or at anchor, a sailing vessel, a vessel engaged in fishing, whether underway or at anchor; and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in paragraphs (a) or (b) of this Rule, sound at intervals of not more than 2 minutes, three blasts in succession; namely, one prolonged followed by two short blasts.

(d) A vessel towed or if more than one vessel is towed the last vessel of the tow, if manned, shall at intervals of not more than 2 minutes sound four blasts in succession, namely, one prolonged followed by three short blasts When practicable, this signal shall be made immediately after the signal made by the towing vessel

(e) When a pushing vessel and a vessel being pushed ahead are rigidly connected in a composite unit they shall be regarded as a power-driven vessel and shall give the signals prescribed in paragraphs (a) or (b) of this Rule

INTERNATIONAL	INLAND

f A vessel at anchor shall at intervals of not more than one minute ring the bell rapidly for about 5 seconds In a vessel of 100 meters or more in length the bell shall be sounded in the forepart of the vessel and immediately after the ringing of the bell the gong shall be sounded rapidly for about 5 seconds in the after part of the vessel A vessel at anchor may in addition sound three blasts in succession, namely one short, one prolonged and one short blast, to give warning of her position and of the possibility of collision to an approaching vessel

g A vessel aground shall give the bell signal and if required the gong signal prescribed in paragraph f of this Rule and shall, in addition, give three separate and distinct strokes on the bell immediately before and after the rapid ringing of the bell A vessel aground may in addition sound an appropriate whistle signal

h A vessel of less than 12 meters in length shall not be obliged to give the above-mentioned signals but, if she does not, shall make some other efficient sound signal at intervals of not more than 2 minutes

i A pilot vessel when engaged on pilotage duty may in addition to the signals prescribed in paragraphs a b or f of this Rule sound an identity signal consisting of four short blasts

j The following vessels shall not be required to sound signals as prescribed in paragraph f of this Rule when anchored in a special anchorage area designated by the Secretary.

i a vessel of less than 20 meters in length, and

ii a barge, canal boat, scow, or other nondescript craft.

Rule 35 covers sound signals in restricted visibility and is the same in international and inland waters with two exceptions. Rule 35(c) in International Rules refers to "vessels constrained by their draft." These vessels are not referred to in the Inland Rules. The other exception is Rule 35(j) of the Inland Rules. This Rule says the sounding of fog signals by small vessels in designated special anchorage areas is not considered necessary.

RULE 36

Signals to Attract Attention

If necessary to attract the attention of another vessel, any vessel may make light or sound signals that cannot be mistaken for any signal authorized elsewhere in these Rules, or may direct the beam of her searchlight in the direction of the danger, in such a way as not to embarrass any vessel.

Fishermen on the high seas have been authorized to use searchlights to indicate the presence of their gear The success of this has led to the extension of the use of searchlights to all vessels to permit identifying potential hazards.

RULE 37

When a vessel is in distress and requires assistance she shall use or exhibit the signals prescribed in Annex IV to these Regulations.

The Rule requires the use of recognized distress signals that are contained in Annex IV.

TABLE 2. SUMMARY OF SOUND SIGNALS

Maneuvering and warning Signals

International		*Inland*	
●	I am altering course to stbd.	●	I intend/agree to port to port passing
●●	I am altering course to port	●●	I intend/agree to stbd to stbd passing
●●●	I am operating astern propulsion	●●●	I am operating astern propulsion
▬▬●	I intend to overtake you on your stbd side	●	I intend/agree to overtake you on your stbd side
▬▬●●	I intend to overtake you on your port side	●●	I intend/agree to overtake you on your port side
▬●▬●	Agreement to overtaking signal		
●●●●●	Danger signal	●●●●●	Danger signal
▬	Bend signal	▬	Bend signal
		▬	Departing dock or berth

Table 2. SUMMARY OF SOUND SIGNALS

Sound Signals in Restricted Visibility	
International	Inland
— Making Way	— Making way
— — Underway but stopped and making no way	— — Underway but stopped and making no way
— • • vessel not under command, vessel restricted in her ability to maneuver, vessel constrained by draft, sailing vessel, vessel engaged in fishing, vessel engaged in towing or pushing	— • • vessel not under command, vessel restricted in her ability to maneuver underway or at anchor, sailing vessel, vessel engaged in fishing underway or at anchor, vessel engaged in towing or pushing another vessel.
— • • • vessel being towed or last vessel of tow	— • • • vessel being towed or last vessel of tow
rapid ringing of bell for 5 sec ev. min. • — • anchored	rapid ringing of bell for 5 sec. ev. min. • — • anchored
rapid ringing of bell for 5 sec. followed by rapid ringing of gong ev. min. Anchored over 100 meters	rapid ringing of bell for 5 sec. followed by rapid ringing of gong ev. min. Anchored over 100 meters
three strokes of bell after bell or gong signal ev. min. Aground	three strokes of bell after bell or gong signal ev. min. Aground
• • • • Pilot vessel engaged on pilotage duty	• • • • Pilot vessel engaged on pilotage duty

NOTE: Signal Interval are 2 minutes unless otherwise noted.

INTERNATIONAL	INLAND
RULE 38	RULE 38
Any vessel (or class of vessels) provided that she complies with the requirements of the International Regulations for Preventing Collisions at Sea, 1960, the keel of which is laid or which is at a corresponding stage of construction before the entry into force of these Regulations may be exempted from compliance therewith as follows:	Any vessel or class of vessels, the keel of which is laid or which is at a corresponding stage of construction before the date of enactment of this Act, provided that she complies with the requirements of
(a) The installation of lights with ranges prescribed in Rule 22, until four years after the date of entry into force of these Regulations.	(a) The Act of June 7, 1897 (30 Stat. 96), as amended 33 U.S.C. 154-232) for vessels navigating the waters subject to that statute;
(b) The installation of lights with color specifications as prescribed in Section 7 of Annex I to these Regulations, until four years after the date of entry into force of these Regulations.	(b) Section 4233 of the Revised Statutes (33 U.S.C. 301-356) for vessels navigating the waters subject to that statute;
(c) The repositioning of lights as a result of conversion from Imperial to metric units and rounding off measurement figures, permanent exemption.	(c) The Act of February 8, 1895 (28 Stat. 645), as amended (33 U.S.C. 241-295) for vessels navigating the waters subject to that statute; or
(d)(i) The repositioning of masthead lights on vessels of less than 150 meters in length, resulting from the prescriptions of Section 3(a) of Annex I, permanent exemption.	(d) Sections 3,4, and 5 of the Act of April 25, 1940 (54 Stat. 163), as amended (46 U.S.C. 526 b,c, and d) for motorboats navigating the waters subject to that statute; shall be exempted from compliance with the technical Annexes to these Rules as follows: (i) the installation of lights with ranges prescribed in Rule 22, until 4 years after the effective date of these Rules, except that vessels of less than 20 meters in length are permanently exempt;
(ii) The repositioning of masthead lights on vessels of 150 meters or more in length, resulting from the prescriptions of Section 3(a) of Annex I to these Regulations, until 9 years after the date of entry into force of these Regulations	(ii) the installation of lights with color specifications as prescribed in Annex I to these Rules, until 4 year after the effective date of these Rules, except that vessels of less than 20 meters in length are permanently exempt;
(e) The repositioning of masthead light resulting from the prescription of Section 2(b) of Annex I, until 9 years after the date of entry into force of these Regulations.	(iii) the repositioning of lights as a result of conversion to metric units and rounding off measurement figures, are permanently exempt, and
(f) The repositioning of sidelights resulting from the prescriptions of Sections 2(g) and 3(b) of Annex I, until 9 years after the date of entry into force of these Regulations.	(iv) the horizontal repositioning of masthead lights prescribed by Annex I to these Rules. (1) on vessels of less than 150 meters in length, permanent exemption.

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(g) The requirements for sound signal appliances prescribed in Annex III, until 9 years after the date of entry into force of these Regulations.	(2) on vessels of 150 meters or more in length, until 9 years after the effective date of these Rules.
	(d)(v) the restructuring or repositioning of all lights to meet the prescriptions of Annex I to these Rules, until 9 years after the effective date of these Rules.
	(vi) power-driven vessels of 12 meters or more but less than 20 meters in length are permanently exempt from the provisions of Rule 23(a)(i) and 23(a)(iv) provided that, in place of these lights the vessel exhibits a white light aft visible all-round the horizon; and
	(vii) the requirements for sound signal appliances prescribed in Annex III to these Rules, until 9 years after the effective date of these Rules.
	SEC. 3. The Secretary may issue regulations necessary to implement and interpret this Act. The Secretary shall establish the following technical annexes to these Rules: Annex I, Positioning and Technical Details of Lights and Shapes; Annex II, Additional Signals for Fishing Vessels Fishing in Close Proximity; Annex III, Technical Details of Sound Appliances; and Annex IV, Distress Signals. These annexes shall be consistent as possible with the respective annexes to the International Regulations. The Secretary may establish other technical annexes, including pilot rules.
	SEC. 4. (a)Whoever operates a vessel in violation of this Act, or of any regulation issued thereunder, or in violation of a certificate of alternative compliance issued under Rule 1 is liable to a civil penalty of not more than $5,000 for each violation.
	(b) Every vessel subject to this Act, other than a public vessel being used for noncommercial purposes, that is operated in violation of this Act, or of any regulation issued thereunder, or in violation of a certificate of alternative compliance issued under Rule 1 is liable to a civil penalty of not more than $5,000 for each violation, for which penalty the vessel may be seized and proceeded against in the district court of the United States of any district within which the vessel may be found.
	(c) The Secretary may assess any civil penalty authorized by this section. No such penalty may be assessed until the person charged, or the owner of the vessel charged, as appropriate shall have been

given notice of the violation involved and an opportunity for a hearing. For good cause shown, the Secretary may remit, mitigate, or compromise any penalty assessed. Upon the failure of the person charged, or the owner of the vessel charged, to pay an assessed penalty, as it may have been mitigated or compromise, the Secretary may request the Attorney General to commence an action in the appropriate district court of the United States for collection of the penalty as assessed, without regard to the amount involved, together with such other relief as may be appropriate.

(d) The Secretary of the Treasury shall withhold or revoke, at the request of the Secretary, the clearance, required by section 4197 of the Revised Statutes of the United States (46 U.S.C. 91) of any vessel, the owner or operator of which is subject to any of the penalties in this section. Clearance may be granted in such cases upon filing of a bond or other surety satisfactory to the Secretary.

SEC. 5. (a) The Secretary shall establish a Rule of the Road Advisory Council (hereinafter referred to as the Council) not exceeding 21 members. To assure balanced representation, members shall be chosen, insofar as practical, from the following groups: (1) recognized experts and leaders in organizations having an active interest in the Rules of the Road and vessel and port safety, (2) representatives of owners and operators of vessels, professional mariners, recreational boaters, and the recreational boating idustry, (3) individuals with an interest in maritime law, and (4) Federal and State officials with responsibility for vessel and port safety. Additional persons may be appointed to panels of the Council to assist the Council in the performance of its functions.

(b) The Council shall advise, consult with, and make recommendations to the Secretary on matters relating to any major proposals for changes to the Inland Rules and International Regulations to the Secretary. Any advice or recommendation made by the Council to the Secretary shall reflect the independent judgement of the Council on the matter concerned. The Council shall meet at the call of the Secretary, but in any event not less than once during each calendar year. All proceedings of the Council shall be public, and a record of the proceedings shall be made available for public inspection.

(c) The Secretary shall furnish to the Council an executive secretary and such secretarial, clerical, and other services as are deemed necessary for the conduct of its business. Members of the Council who are not officers or employees of the United States shall, while attending meetings of the Council or while otherwise engaged in the business of the Council, be entitled to receive compensation at a rate fixed by the Secretary, not exceeding the daily equivalent of the current rate of basic pay in effort for GS-18 of the General Schedule under section 5332 of title 5, Untied States Code, including travel-time; and while away from their home or regular place of business, they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code. Payments under this section shall not render members of the Council officers or employees of the United States for any purpose.

(d) Unless extended by subsequent Act of Congress, the Council shall terminate 5 years from the date of enactment of this Act.

SEC. 6. The International Navigational Rules Act of 1977 (91 Stat. 308; 33U.S.C. 1601), is amended as follows:

(1) in section 5 by amending subsection (a) to read as follows:

"The International Regulations do not apply to vessels while in the waters of the United States shoreward of the navigational demarcation lines dividing the high seas from harbors, rivers, and other inland waters of the United states."

(2) in section 6, by adding a new subsection (d) as follows:

"(d) A certification authorized by this section may be issued for a class of vessels.";

(3) in subsection (a) of section 9 by striking "$500" and inserting in lieu thereof "$5,000".

(4) in subsection (b) of section 9 by striking "$500" and inserting in lieu thereof "not more than $5,000".

SEC. 7. Sections 2,4,6(1), and 8(a) are effective 12 months after the date of enactment of this Act,

except that on the Great Lakes, the effective date of sections 2 and 4 will be established by the Secretary. Section 5 is effective October 1, 1981.

SEC 8. (a) The laws specified in the following schedules are repealed. Any prior rights or liabilities existing under these laws are not affected by their repeal.

REVISED STATUTES

SEC. 4233.
SEC. 4233A.
SEC. 4233B.
SEC. 4233C.

Date	Chapter	Statutes at Large sections	Volume	Page
1890: Aug 19	802		26	320
1893: Mar 3	202		27	557
1895 Feb. 19	102	1, 3, 4	28	672
1897.				
Mar 3	389	5, 12, 13	29	689
June 7	4		30	96
1900: Feb 19	22		31	30
1905: Mar 3	1457	10	33	1032
1914. May 25	98		38	381
1933 Mar 1	157		47	1417
1935 Aug 21	595	2, 3, 4, 5	49	669
1936 May 20	433		49	1367
1940-				
Apr 22	128	1, 3	54	150
Apr 25	155	3, 4, 5	54	164
1945: Dec. 3	511	1, 2	59	590
1948.				
Mar 5	99		62	69
May 21	328		62	249
1953 Aug 8	386		67	497
1956: June 4	353		70	228

Date	Public Law	Sections	Volume	Page
1958:				
Aug. 14	85-635		72	590
Aug. 14	85-656		72	612
1963.				
Aug. 5	88-84		77	116
Oct. 30	88-163		77	281
1966: Nov 5	89-764	1, 2, 5, 6	80	1313

(b) The following laws are repealed when the Secretary establishes an effective date under section 7.

1886: Feb. 8	64		28	645
1922:				
May 17	600		45	592
May 17	601		45	593
1929: Feb. 28	270		45	1405
1932: May 9	175		47	152
1940: Apr. 22	128	2	54	150
1948: Mar. 18	138		62	82

Date	Public Law	Sections	Volume	Page
1958: Mar. 28	85-350		72	49
1966: Nov. 5	89-764	3, 4	80	1313

SEC. 9. Section 2(c) of the Act of February 19, 1895 (28 Stat. 672), as amended (33 U.S.C. 151), is amended by striking the words "the Canal Zone,".

Approved December 24, 1980

INTERNATIONAL	INLAND
ANNEX I	**ANNEX I**
Positioning and Technical Details of Lights and Shapes	Positioning and Technical Details of Lights and Shapes
1. Definitions	1. Definitions
The term "height above the hull" means height above the uppermost continuous deck.	(a) The term "height above the hull" means height above the uppermost continuous deck. This height shall be measured from the position vertically beneath the location of the light.
	(b) The term "practical cut-off" means for vessels 20 meters or more in length, 12.5 percent of the minimum luminous intensity (Table in 8(b)) corresponding to the greatest range of visibility for which the requirements of Annex I are met.
	(c) The term Rule "Rule" or "Rules" means the Inland Navigation Rules contained in Sec. 2 of the Inland Navigation Rules Act of 1980 (Pub. L. 96-591, 94 Stat. 3415, 33 U.S.C. 20001, December 24, 1980) as amended.
2. Vertical positioning and spacing of lights	2. Vertical positioning and spacing of lights
(a) On a power-driven vessel of 20 meters or more in length the masthead lights shall be placed as followed:	(a) On a power-driven vessel of 20 meters or more in length the masthead lights shall be placed as follows:
(i) the forward masthead light, or if only one masthead light is carried, then that light, at a height above the hull of not less than 6 meters, and, if the breadth of the vessel exceeds 6 meters, then at a height above the hull not less than such breadth, so however that the light need not be placed at a greater height above the hull than 12 meters,	(1) the forward masthead light, or if only one masthead light is carried, then that light at a height above the hull of not less than 5 meters, and, if the breadth of the vessel exceeds 5 meters, then at a height above the hull not less than such breadth, so however that the light need not be placed at a greater height above the hull than 8 meters;
(ii) When two masthead lights are carried the after one shall be at least 4.5 meters vertically higher than the forward one.	(2) when two masthead lights are carried the after one shall be at least 2 meters vertically higher than the forward one.
(b) The vertical separation of masthead lights of power-driven vessels shall be such that in all normal conditions of trim the after light will be seen over and separate from the forward light at a distance of 1000 meters from the stem when viewed from sea level.	(b) The vertical separation of the masthead lights of power-driven vessels shall be such that in all normal conditions of trim the after light will be seen over and separate from the forward light at a distance of 1000 meters from the stem when viewed from water level.
(c) The masthead light of a power-driven vessel of 12 meters but less than 20 meters in length shall be	(c) The masthead light of a power-driven vessel of 12 meters but less than 20 meters in length shall be

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placed at a height above the gunwale of not less than 2.5 meters.	placed at a height above the gunwale of not less than 2.5 meters.
(d) A power-driven vessel of less than 12 meters in length may carry the uppermost light at a height of less than 2.5 meters above the gunwale. When however a masthead light is carried in addition to sidelights and a sternlight, then such masthead light shall be carried at least 1 meter higher than the sidelights.	(d) The masthead light, or the all-round light described in Rule 23(c), of a power-driven vessel of less than 12 meters in length shall be carried at least one meter higher than the sidelights.
(e) One of the two or three masthead lights prescribed for a power-driven vessel when engaged in towing or pushing another vessel shall be placed in the same position as the forward masthead light of a power-driven vessel.	(e) One of the two or three masthead lights prescribed for a power-driven vessel when engaged in towing or pushing another vessel shall be placed in the same position as either the forward masthead light or the after masthead light, provided that the lowest after masthead light shall be at least 2 meters vertically higher than the highest forward masthead light.
(f) In all circumstances the masthead light or lights shall be so placed as to be above and clear of all other lights and obstructions.	(f)(i) The masthead light or lights prescribed in Rule 23(a) shall be so placed as to be above and clear of all other lights and obstructions except as described in subparagraph (2). (2) When it is impracticable to carry the all-round lights prescribed in Rule 27(b)(i) below the masthead lights, they may be carried above the after masthead light(s) or vertically in between the forward masthead light(s) and after masthead light(s), provided that in the latter case the requirement of para 3(d) shall be complied with.
(g) The sidelights of a power-driven vessel shall be placed at a height above the hull not greater than three quarters of that of the forward masthead light. They shall not be so low as to be interfered with by deck lights.	(g) The sidelights of a power-driven vessel shall be placed at least one meter lower than the forward masthead light. They shall not be so low as to be interfered with by deck lights.
(h) The sidelights, if in a combined lantern and carried on a power-driven vessel of less than 20 meters in length, shall be placed not less than 1 meter below the masthead light.	(h) (Reserved)
(i) When the Rules prescribe two or three lights to be carried in a vertical line, they shall be spaced as follows: (i) on a vessel of 20 meters in length or more such lights shall be spaced not less than 2 meters apart, and the lowest of these lights shall, except where a towing light is required, not be less than 4 meters above the hull:	(i) When the Rules prescribe two or three lights to be carried in a vertical line, they shall be spaced as follows:

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(ii) on a vessel of less than 20 meters in length such lights shall be spaced not less than 1 meter apart and the lowest of these lights shall, except where a towing light is required, not be less than 2 meters above the gunwale;	(1) on a vessel of 20 meters in length or more such lights shall be spaced not less than 1 meter apart, and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than 4 meters above the hull;
(iii) when three lights are carried they shall be equally spaced.	(2) on a vessel of less than 20 meters in length such lights shall be spaced not less than 1 meter apart and the lowest of these lights shall, except where a towing light is required, be placed at a height of not less than 2 meters above the hull;
	(3) when three lights are carried they shall be equally spaced.
(j) The lower of the two all-round lights prescribed for a fishing vessel when engaged in fishing shall be at a height above the sidelights not less than twice the distance between the two vertical lights.	(j) The lower of the two all-round lights prescribed for a vessel when engaged in fishing shall be a height above the sidelights not less than twice the distance between the two vertical lights.
(k) The forward anchor light, when two are carried, shall not be less than 4.5 meters above the after one. On a vessel of 50 meters or more in length this forward anchor light shall not be less than 6 meters above the hull.	(k) The forward anchor light prescribed in Rule 30(a)(i), when two are carried, shall not be less than 4.5 meters above the after one. On a vessel of 50 meters or more in length this forward anchor light shall be placed at a height of not less than 6 meters above the hull.
3. Horizontal positioning and spacing of lights	3. Horizontal positioning and spacing of lights
(a) When two masthead lights are prescribed for a power-driven vessel, the horizontal distance between them shall not be less than one half of the length of the vessel but need not be more than 100 meters. The forward light shall be placed not more than one quarter of the length of the vessel from the stem.	(a) Except as specified in paragraph (b), when two masthead lights are prescribed for a power-driven vessel, the horizontal distance between them shall not be less than one quarter of the length of the vessel but need not be more than 50 meters. The forward light shall be placed not more than one of the length of the vessel.
(b) On a vessel of 20 meters or more in length the sidelights shall not be placed in front of the forward masthead lights. They shall be placed at or near the side of the vessel.	(b) On power-driven vessels 50 meters but less than 60 meters in length operated on the Western Rivers, the horizontal distance between masthead lights shall not be less than 10 meters.
	(c) On a power-driven vessel of 20 meters or more in length the sidelights shall not be placed in front of the forward masthead lights. They shall be placed at or near the side of the vessel.
	(d) When the lights prescribed in Rule 27(b)(i) are placed vertically between the forward masthead light(s) and the after masthead light(s) these all-round lights shall be placed at a horizontal distance

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4. Details of location of direction-indicating lights for fishing vessels, dredgers and vessels engaged in underwater operations.	of not less than 2 meters from the fore and aft centerline of the vessel in the athwartship direction.
(a) The light indicating the direction of the outlying gear from a vessel engaged in fishing as prescribed in Rule 26(c)(ii) shall be placed at a horizontal distance of not less than 2 meters and not more than 6 meters away from the two all-round red and white lights. This light shall be placed not higher than the all-round white light prescribed in Rule 26(c)(i) and not lower than the sidelights.	4. Details of location of direction-indicating lights for fishing vessels, dredgers and vessels engaged in underwater operations. (a) The light indicating the direction of the outlying gear from a vessel engaged in fishing as prescribed in Rule 26(c)(ii) shall be placed at a horizontal distance of not less than 2 meters and not more than 6 meters from the two all-round red and white lights. This light shall be placed not higher than the all-round white light prescribed in Rule 26(c)(i) and not lower than the sidelights.
(b) The lights and shapes on a vessel engaged in dredging or underwater operations to indicate the obstructed side and/or the side on which it is safe to pass, as prescribed in Rule 27(d)(i) and (ii), shall be placed at the maximum practical horizontal distance, but in no case less than 2 meters, from the lights or shapes prescribed in Rule 27(b)(i) and (ii). In no case shall the upper of these lights or shapes be at a greater height than the lower of the three lights or shapes prescribed in Rule 27(b)(i) and (ii).	(b) The lights and shapes on a vessel engaged in dredging or underwater operations to indicate the obstructed side and/or the side on which it is safe to pass, as prescribed in Rule 27(d)(i) and (ii), shall be placed at the maximum practical horizontal distance, but in no case less than 2 meters, from the lights or shapes prescribed in Rule 27(b)(i) and (ii). In no case shall the upper of these lights or shapes be at a greater height than the lower of the three lights or shapes prescribed in Rule 27(b)(i) and (ii).
5. Screens for sidelights The sidelights shall be fitted with inboard screens painted matt black, and meeting the requirements of Section 9 of this Annex. With a combined lantern, using a single vertical filament and a very narrow division between the green and red sections, external screens need not be fitted.	5. Screens (a) The sidelights of vessels of 20 meters or more in length shall be fitted with matt black inboard screens and meet the requirements of para 9. On vessels of less than 20 meters in length, the sidelights, if necessary to meet the requirements of para 9, shall be fitted with matt black inboard screens. With a combined lantern, using a single vertical filament and a very narrow division between the green and red sections, external screens need not be fitted. (b) On power-driven vessels less than 12 meters in length constructed after July 31, 1983, the masthead light, or the all-round light described in Rule 23(c) shall be screened to prevent direct illumination of the vessel forward of the operator's position.
6. Shapes (a) Shapes shall be black and of the following sizes: (i) a ball shall have a diameter of not less than 0.6 meter;	6. Shapes (a) Shapes shall be black and of the following sizes: (1) a ball shall have a diameter of not less than 0.6 meter;

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(ii) a cone shall have a base diameter of not less than 0.6 meter and a height equal to its diameter,	(2) a cone shall have a base diameter of not less than 0.6 meter and a height equal to its diameter,
(iii) a cylinder shall have a diameter of at least 0.6 meter and a height of twice its diameter,	(3) a diamond shape shall consist of two cones (as defined in paragraph (a)(2) of this section) having a common base.
(iv) a diamond shape shall consist of two cones as defined in (ii) above having a common base.	
(b) The vertical distance between shapes shall be at least 1.5 meter.	(b) The vertical distance between shapes shall be at least 1.5 meter.
(c) In a vessel of less than 20 meters in length shapes of lesser dimensions but commensurate with the size of the vessel may be used and the distance apart may be correspondingly reduced.	(c) In a vessel of less than 20 meters in length shapes of lesser dimensions but commensurate with the size of the vessel may be used and the distance apart may be correspondingly reduced.
7. Color specification of lights	7. Color specification of lights
(a) The chromaticity of all navigation lights shall conform to the following standards, which lie within the boundaries of the area of the diagram specified for each color by the International Commission on Illumination (CIE). The boundaries of the area for each color are given by indicating the corner co-ordinates, which are as follows:	(a) The chromaticity of all navigation lights shall comform to the following standards, which lie within the boundaries of the area of the diagram specified for each color by the International Commission on Illumination (CIE), in the "Colors of Light Signals", which is incorporated by reference. It is Publication CIE No. 2.2 (TC-1.6), 1975, and is available from the Illumination Engineering Society, 345 East 47th Street, New York, NY 10017. It is also available for inspection at the Office of the Federal Register Information Center, Room 8301, 1100 L Street N.W., Washington, DC 20408. This incorporation by reference was approved by the Director of the Federal Register.
	(b) The boundaries of the area for each color are given by indicating the corner co-ordinates, which are as follows:
(i) White:	(1) White:
x 0.525 0.525 0.452 0.310 0.310 0.443.	x 0.525 0.525 0.452 0.310 0.310 0.443
y 0.382 0.440 0.440 0.348 0.283 0.382.	y 0.382 0.440 0.440 0.348 0.283 0.382
(ii) Green:	(2) Green:
x 0.028 0.009 0.300 0.203	x 0.028 0.009 0.300 0.203
y 0.385 0.723 0.511 0.356	y 0.385 0.723 0.511 0.356

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(iii) Red:	(3) Red:
x 0.680 0.660 0.735 0.721	x 0.680 0.660 0.735 0.721
y 0.320 0.320 0.265 0.259	y 0.320 0.320 0.265 0.259
(iv) Yellow:	(4) Yellow:
x 0.612 0.618 0.575 0.575	x 0.612 0.618 0.575 0.575
y 0.382 0.382 0.425 0.406	y 0.382 0.382 0.425 0.406
8. Intensity of lights	8. Intensity of lights
(a) The minimum luminous intensity of lights shall be calculated by using the formula:	(a) The minimum luminous intensity of lights shall be calculated by using the formula:
$I = 3.43 \times 10^6 \times T \times D^2 \times K^{-D}$	$I = 3.43 \times 10^6 \times T \times D^2 \times K^{-D}$
where I is luminous intensity in candelas under service conditions, T is threshold factor 2×10^{-7} lux, D is range of visibility (luminous range) of the light in nautical miles, K is atmospheric transmissivity. For prescribed lights the value of K shall be 0.8, corresponding to a meteorological visibility of approximately 13 nautical miles	where I is luminous intensity in candelas under service condition, T is threshold factor 2×10^{-7} lux, D is range of visibility (luminous range) of the light in nautical miles, K is atmospheric transmissivity For prescribed lights the value of K shall be 0.8, corresponding to a meteorological visibility of approximately 13 nautical miles.
(b) A selection of figures derived from the formula is given in the following table:	(b) A selection of figures derived from the formula is given in Table below:

Range of visibility (luminous range) of lights in nautical miles	Luminious intensity of light in candelas for K = 0.8	Range of visibiltiy (luminous range) of lights in nautical miles	Minimum Lumininous intensity of light in candelas for K = 0.8
D	I	D	I
1	0.9	1	0.9
2	4.3	2	4.3
3	12	3	12
4	27	4	27
5	52	5	52
6	94	6	94

Note: The maximum luminous intensity of navigation lights should be limited to avoid undue glare.

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9. Horizontal sectors	9. Horizontal sectors
(a)(i) In the forward direction, sidelights as fitted on the vessel must show the minimum required intensities. The intensities must decrease to reach practical cut-off between 1 degree and 3 degrees outside the prescribed sectors.	(a)(1) In the forward direction, sidelights as fitted on the vessel shall show the minimum required intensities. The intensities shall decrease to reach practical cut-off between 1 and 3 degrees outside the prescribed sectors.
(ii) For sternlights and masthead lights and at 22.5 degrees abaft the beam for sidelights, the minimum required intensities shall be maintained over the arc of the horizon up to 5 degrees within the limits of the sectors prescribed in Rule 21. From 5 degrees within the prescribed sectors the intensity may decrease by 50 percent up to the prescribed limits, it shall decrease steadily to reach practical cut-off at not more than 5 degrees outside the prescribed limits.	(2) For sternlights and masthead lights and at 22.5 degrees abaft the beam for sidelights, the minimum required intensities shall be maintained over the arc of the horizon up to 5 degrees within the limits of the sectors prescribed in Rule 21. From 5 degrees within the prescribed sectors the intensity may decrease by 50 percent up to the prescribed limits, it shall decrease steadily to reach practical cut-off at not more than 5 degrees outside the prescribed sectors.
(b) All-round lights shall be so located as not to be obscured by masts, topmasts or structures within angular sectors of more than 6 degrees, except anchor lights, which need not be placed at an impracticable height above the hull.	(b) All-round lights shall be so located as not to be obscured by masts, topmasts or structures within angular sectors of more than 6 degrees, except anchor lights prescribed in Rule 30, which need not be placed at an impracticable height above the hull, and the all-round white light described in Rule 23(d), which may not be obsured at all.
10. Vertical sectors	10. Vertical sectors
(a) The vertical sectors of electric lights, with the exception of lights on sailing vessels shall ensure that:	(a) The vertical sectors of electric lights as fitted, with the exception of lights on sailing vessels and on unmanned barges, shall ensure that:
(i) at least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal;	(1) at least the required minimum intensity is maintained at all angles from 5 degrees below the horizontal;
(ii) at least 60 percent of the required minimum intensity is maintained from 7.5 degrees below the horizontal.	(2) at least 60 percent of the required minimum intensity is maintained from 7 5 degrees above to 7 5 degrees below the horizontal.
(b) In the case of sailing vessels the vertical sectors of electric lights shall ensure that:	(b) In the case of sailing vessels the vertical sectors of electric lights as fitted shall ensure that:
(i) at least the required minimum intensity is maintained at all angles from 5 degrees above to 5 degrees below the horizontal;	(1) at least the required minimum intensity is maintained at all angles from 5 degrees below the horizontal;
(ii) at least 50 percent of the required minimum intensity is maintained from 25 degrees above to 25 degrees below the horizontal.	(2) at least 50 percent of the required minimum intensity is maintained from 25 degrees above to 25 degrees below the horizontal.

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(c) In the case of lights other than electric these specifications shall be met as closely as possible.	(c) In the case of unmanned barges the minimum required intensity of electric lights as fitted shall be maintained on the horizontal.
	(d) In the case of lights other than electric lights these specifications shall be met as closely as possible.
11. Intensity of non-electric lights	11. Intensity of non-electric lights
Non-electric lights shall so far as practicable comply with the minimum intensities, as specified in the Table given in Section 8 of this Annex.	Non-electric lights shall, so far as practicable comply with the minimum intensities, as specified in the Table given in para 12(b).
12. Maneuvering light	12. Maneuvering light
Notwithstanding the provisions of paragraph 2(f) of this Annex the maneuvering light described in Rule 34(b) shall be placed in the same fore and aft vertical plane as the masthead light or lights and, where practicable, at a minimum height of 2 meters vertically above or below the after masthead light.	Notwithstanding the provisions of para 2(f), the maneuvering light described in Rule 34(b) shall be placed approximately in the same fore and aft vertical plane as the masthead light and, where practicable, at a minimum height of one-half meter vertically above the forward masthead light, provided that it shall be carried not less than one-half meter vertically above or below the after masthead light. On a vessel where only one masthead light is carried the maneuvering light, if fitted, shall be carried where it can best be seen, not less than one-half meter vertically apart from the masthead light.
13. Approval	13. Approval (Reserved)
The construction of lanterns and shapes and the installation of lanterns on board the vessel shall be to the satisfaction of the appropriate authority of the State where the vessel is registered.	(Sec. 3, Pub. L. 96-591; 49 CFR 1.46(n)(14))

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ANNEX II

Additional Signals for Fishing Vessels Fishing in Close Proximity

1. General

The lights mentioned herein shall, if exhibited in pursuance of Rule 26(d), be placed where they can best be seen. They shall be at least 0.9 meter apart but at a lower level than lights prescribed in Rule 26(b)(i) and (c)(i). The lights shall be visible all around the horizon at a distance of at least 1 mile but at a lesser distance from the lights prescribed by these Rules for fishing vessels.

2. Signals for trawlers

(a) Vessels when engaged in trawling, whether using demersal or pelagic gear, may exhibit.

(1) when shooting their nets: two white lights in a vertical line;

(2) when hauling their nets: one white light over one red light in a vertical line;

(3) when the net has come fast upon an obstruction: two red lights in a vertical line.

(b) Each vessel engaged in pair trawling may exhibit:

(1) by night, a search light directed forward and in the direction of the other vessel of the pair,

(2) when shooting or hauling their nets or when their nets have come fast upon an obstruction, the lights prescribed in paragraph (a) above.

3. Signals for purse seiners

Vessels engaged in fishing with purse seiner gear may exhibit two yellow lights in a vertical line. These lights shall flash alternately every second and with equal light and occultation duration. These lights may be exhibited only when the vessel is hampered by its fishing gear. (Sec. 3, Pub. L. 96-591, 33 USC 2071, 49 CFR 1.46(n)(14))

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ANNEX III

Technical Details of Sound Signal Appliances

1. Whistles

(a) Frequencies and range of audibility-The fundamental frequency of the signal shall lie within the range 70-700 Hz.

The range of audibility of the signal from a whistle shall be determined by those frequencies, which may include the fundamental and/or one or more higher frequencies, which lie within the range 180-700 Hz (± 1 percent) and which provide the sound pressure levels specified in paragraph 1(c) below.

(b) Limits of fundamental frequencies - To ensure a wide variety of whistle characteristics, the fundamental frequency of a whistle shall be between the following limits:

(i) 70-200 Hz, for a vessel 200 meters or more in length;

(ii) 130-350 Hz, for a vessel 75 meters but less than 200 meters in length;

(iii) 250-700 Hz, for a vessel less than 75 meters in length.

(c) Sound signal intensity and range of audibility - A whistle fitted in a vessel shall provide, in the direction of maximum intensity of the whistle and at a distance of 1 meter from it, a sound pressure level in at least one 1/3-octave band within the range of frequencies 180-700Hz (± 1 percent) of not less than the appropriate figure given in the table below.

ANNEX III

Technical Details of Sound Signal Appliances

Subpart A - Whistles

1. Frequencies and range of audibility

The fundamental frequency of the signal shall lie within the range 70-525 Hz. The range of audibility of the signal from a whistle shall be determined by those frequencies, which may include the fundamental and/or one or more higher frequencies, which lie within the frequency ranges and provide the sound pressure levels specified in para 3.

2. Limits of fundamental frequencies

To ensure a wide variety of whistle characteristics, the fundamental frequency of a whistle shall be between the following limits:

(a) 70-200Hz, for a vessel 200 meters or more in length;

(b) 130-350 Hz, for a vessel 75 meters but less than 200 meters in length;

(c) 250-525 Hz, for a vessel less than 75 meters in length.

3. Sound signal intensity and range of audibility

A whistle on a vessel shall provide, in the direction of the forward axis of the whistle and at a distance of 1 meter from it, a sound pressure level in at least one 1/3-octave band of not less than the appropriate figure given in the table below within the following frequency range (± 1 percent):

(a) 130-1200 Hz, for a vessel 75 meters or more in length;

(b) 250-1600 Hz, for a vessel 20 meters but less than 75 meters in length;

(c) 250-2100 Hz, for a vessel 12 meters but less than 20 meters in length.

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Length of vessel in meters	1/3-octave band level at 1 meter in dB referred to 2 X 10^{-5} N/M^2	Audibility range in nautical miles
200 or more	143	2
75 but less than 200	138	1.5
20 but less than 75	130	1
Less than 20	120	0.5

The range of audibility in the table above is for information and is approximately the range at which a whistle may be heard on its forward axis with 90 percent probability in conditions of still air on board a vessel having average background noise level at the listening posts (taken to be 68 dB in the octave band centered on 250 Hz and 63 dB in the octave band centered on 500 Hz).

In practice the range at which a whistle may be heard is extremely variable and depends critically on weather conditions: the values given can be regarded as typical but under conditions of strong wind or high ambient noise level at the listening post the range may be much reduced.

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	Fundamental frequency range Hz	For measured frequencies Hz	1/3-octave band level at 1 meter in dB referred to 2 x 10^{-5} N/M^2	Audibility range in nautical miles
A.	70-200	130-180	145	
		180-250	143	2
		250-1200	140	
B.	130-350	130-180	140	
		180-250	138	1.5
		250-1200	134	
C.	250-525	250-450	130	
		450-800	125	1.0
		800-1600	121	
D.	250-525	250-450	120	
		450-800	115	0.5
		800-2100	111	

Length of vessel in meters:

Line A 200 or more
Line B 75 but less than 200
Line C 20 but less than 75
Line D 12 but less than 20

NOTE. The range of audibility in the table above is for information and is approximately the range at which a whistle may usually be heard on its forward axis in conditions of still air on board a vessel having average background noise level at the listening posts (taken to be 68 dB in the octave band centered on 250 Hz and 63 dB in the octave band centered on 500 Hz).

In practice the range at which a whistle may be heard is extremely variable and depends critically on weather conditions: the values given can be regarded as typical but under conditions of strong wind or high ambient noise level at the listening post the range may be much reduced.

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(d) Directional properties - The sound pressure level of a directional whistle shall be not more than 4 dB below the sound pressure on the axis at any direction in the horizontal plane within ± 45 degrees of the axis. The sound pressure level at any other direction in the horizontal plane shall be not more than 10 dB below the sound pressure level on the axis, so that the range in any direction will be at least half the range on the forward axis. The sound pressure level shall be measured in that one-third octave band which determines the audibility range.	4. Directional properties The sound pressure level of a directional whistle shall be not more than 4 dB below the sound pressure level specified in para 3 in any direction in the horizontal plane within ± 45 degrees of the forward axis. The sound pressure level of the whistle in any other direction in the horizontal plane shall not be more than 10 dB less than the sound pressure level specified for the forward axis, so that the range of audibility in any direction will be at least half the range required on the forward axis. The sound pressure level shall be measured in that one-third octave band which determines the audibility range.
(e) Positioning of whistles - When a directional whistle is to be used as the only whistle on a vessel, it shall be installed with its maximum intensity directed straight ahead. A whistle shall be placed as high as practicable on a vessel, in order to reduce interception of the emitted sound by obstructions and also to minimize hearing damage risk to personnel. The sound pressure level of the vessel's own signal at listening posts shall not exceed 110 dB (A) and so far as practicable should not exceed 100 dB (A).	5. Positioning of whistles (a) When a directional whistle is to be used as the only whistle on the vessel and is permanently installed, it shall be installed with its forward axis directed forward. (b) A whistle shall be placed as high as practicable on a vessel, in order to reduce interception of the emitted sound by obstructions and also to minimize hearing damage risk to personnel. The sound pressure level of the vessel's own signal at listening posts shall not exceed 100 dB (A).
(f) Fitting of more than one whistle - If whistles are fitted at a distance apart of more than 100 meters, it shall be so arranged that they are not sounded simultaneously.	6. Fitting of more than one whistle If whistles are fitted at a distance apart of more than 100 meters, they shall not be sounded simultaneously.
(g) Combined whistle system - If due to the presence of obstructions the sound field of a single whistle or of one of the whistles referred to in paragraph 1(f) above is likely to have a zone of greatly reduced signal level, it is recommended that a combined whistle system be fitted so as to overcome this reduction. For the purposes of the Rules a combined whistle system is to be regarded as a single whistle. The whistles of a combined system shall be located at a distance apart of not more than 100 meters and arranged to be sounded simutaneously. The frequency of any one whistle shall differ from those of the others by at least 10 Hz.	7. Combined whistle systems (a) A combined whistle system is a number of whistles (sound emitting sources) operated together. For the purposes of the Rules a combined whistle system is to be regarded as a single whistle. (b) The whistles of a combined system shall: (1) be located at a distance apart of not more than 100 meters, (2) be sounded simultaneously, (3) each have a fundamental frequency different from those of the others by at least 10 Hz, and

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	(4) have a tonal characteristic appropriate for the length of vessel which shall be evidenced by at least two-thirds of the whistles in the combined system having fundamental frequencies falling within the limits prescribed in para 2, or if there are only two whistles in the combined system, by the higher fundamental frequency falling within the limits prescribed in para 2.
	NOTE: If due to the presence of obstructions the sound field of a single whistle or of one of the whistles referred to in para 6 is likely to have a zone of greatly reduced signal level, a combined whistle system should be fitted so as to overcome this reduction.
	8. Towing vessel whistles
	A power-driven vessel normally engaged in pushing ahead or towing alongside may, at all times, use a whistle whose characteristic falls within the limits prescribed by para 2 for the longest customary composite length of the vessel and its tow.
2. Bell or gong	Subpart B - Bell or gong
(a) Intensity of signal - A bell or gong, or other device having similar sound characteristics shall produce a sound pressure level of not less than 110 dB at 1 meter.	9. Intensity of signal A bell or gong, or other device having similar sound characteristics shall produce a sound pressure level of not less than 110 dB at 1 meter.
(b) Construction - Bells and gongs shall be made of corrosion-resistant material and designed to give a clear tone. The diameter of the mouth of the bell shall be not less than 300 mm for vessels of more than 20 meters in length, and shall be not less than 200 mm for vessels of 12 to 20 meters in length. Where practicable, a power-driven bell striker is recommended to ensure constant force but manual operation shall be possible. The mass of the striker shall be not less than 3 percent of the mass of the bell.	10. Construction Bells and gongs shall be made of corrosion-resistant material and designed to give a clear tone. The diameter of the mouth of the bell shall be not less than 300 mm for vessels of more than 20 meters in length; and shall be not less than 200 mm for vessels of 12 to 20 meters in length. The mass of the striker shall be not less than 3 percent of the mass of the bell. The striker shall be capable of manual operation. NOTE: When practicable, a power-driven bell striker is recommended to ensure constant force.
3. Approval The construction of sound signal appliances, their performance and their installation on board the vessel shall be to the satisfaction of the appropriate authority of the State where the vessel is registered.	Subpart C – Approval 11. Approval (Reserved) (SEC. 3, Pub. L. 96-591; 49 CFR 1.46 (n)(14))

ANNEX IV

Distress Signals

1. Need of assistance

The following signals, used or exhibited either together or separately, indicate distress and need of assistance:

(a) a gun or other explosive signal fired at intervals of about a minute;

(b) a continuous sounding with any fog-signalling apparatus;

(c) rockets or shells, throwing red stars fired one at a time at short intervals;

(d) a signal made by radiotelegraphy or by any other signaling method consisting of the group ...---... (SOS) in Morse Code:

(e) a signal sent by radiotelephony consisting of the spoken word "Mayday";

(f) the International Code Signal of distress indicated by N.C.;

(g) a signal consisting of a square flag having above or below it a ball or anything resembling a ball;

(h) flames on the vessel (as from a burning tar barrel, oil barrel, etc);

(i) a rocket parachute flare or a hand flare showing a red light;

(j) a smoke signal giving off orange-colored smoke;

(k) slowly and repeatedly raising and lowering arms out stretched to each side;

(l) the radiotelegraph alarm signal:

(m) the radiotelephone alarm signal:

(n) signals transmitted by emergency position-indicating radio beacons.

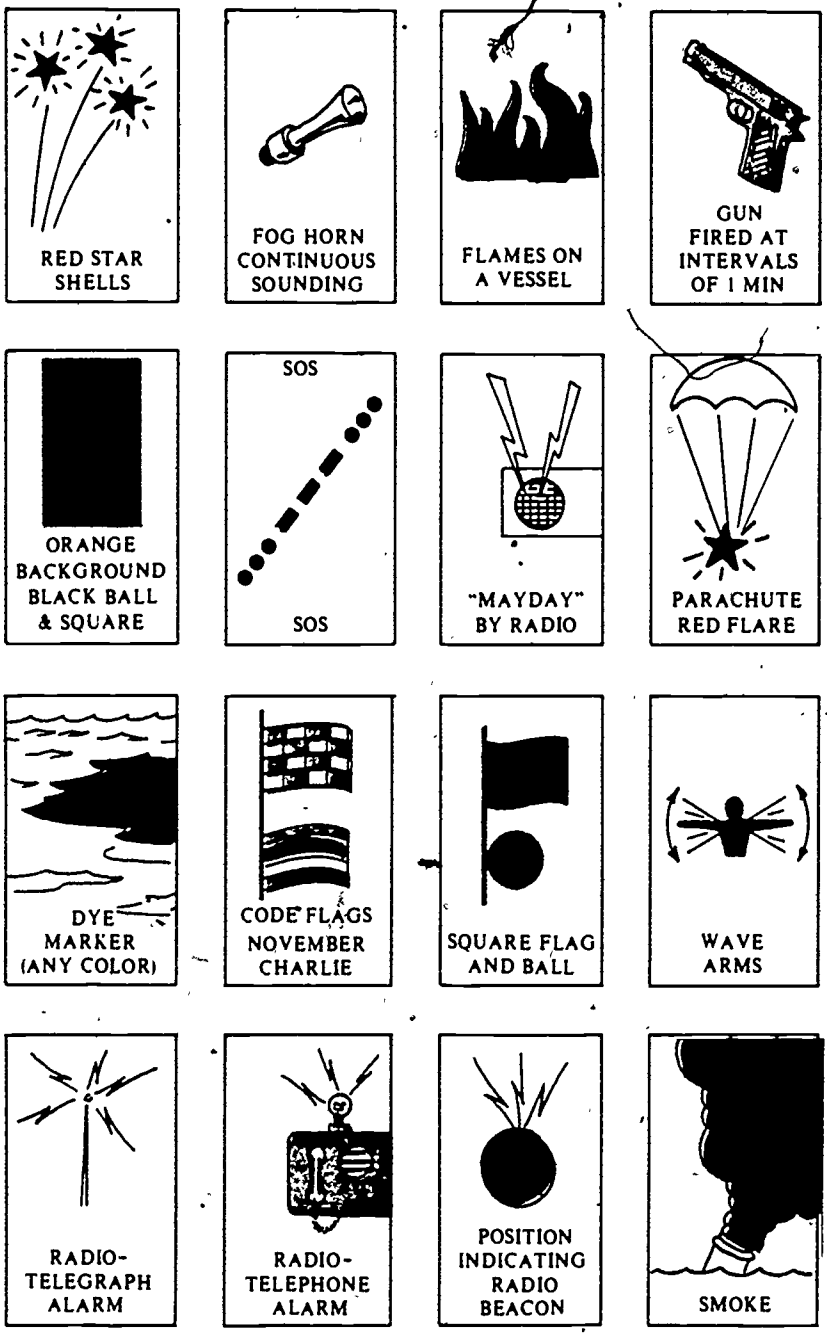
2. The use or exhibition of any of the foregoing signals except for the purpose of indicating distress and need of assistance and the use of other signals which may be confused with any of the above signals is prohibited.

3. Attention is drawn to the relevant sections of the International Code of Signals, the Merchant Ship Search and Rescue Manual and the following signals:

(a) a piece of orange-colored canvas with either a black square and circle or other appropriate symbol (for identification from the air);

(b) a dye marker.

DISTRESS SIGNALS



(See annex IV)

ANNEX V

Pilot Rules

88.01 Purpose and applicability

The part applies to all vessels operating on United States inland waters and to United States vessels operating on the Canadian waters of the Great Lakes to the extent there is no conflict with Canadian Law.

88.03 Definitions

The terms used in this part have the same meaning as defined in the Inland Navigational Rules Act of 1980.

88.05 Copy of rules

The operator of each self-propelled vessel 12 meters or more in length shall carry on board and maintain for ready reference a copy of the Inland Navigation Rules.

88.07 Cross signals

No person may use what is known among mariners as "cross signals", that is answering one blast with two, or answering two blasts with one.

88.09 Temporary exemption from light and shape requirements when operating under bridges

A vessel's navigation lights and shapes may be lowered if necessary to pass under a bridge.

88.11 Law enforcement vessels

(a) Law enforcement vessels may display a flashing-blue light when engaged in direct law enforcement activities. This light shall be located so that it does not interfere with the visibility of the vessel's navigation lights.

(b) The blue light described in this section may be displayed by law enforcement vessels of the Untied States and the States and their political subdivisions.

88.13 Lights on barges at bank or dock

(a) The following barges shall display at night and, if practicable, in periods of restricted visibility the lights described in paragraph (b) of this section.

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	(1) Every barge projecting into a buoyed or restricted channel.
	(2) Every barge so moored that it reduces the available navigable width of any channel to less than 80 meters.
	(3) Barges moored in groups more than two barges wide or to a maximum width of over 25 meters.
	(4) Every barge not moored parallel to the bank.
	(b) Barges described in paragraph (a) shall carry two unobstructed white lights of an intensity to be visible for at least one mile on a clear night, and arranged as follows:
	(1) On a single moored barge, lights shall be placed on the two corners farthest from the bank.
	(2) On barges moored in group formation, a light shall be place on each of the upstream and downstream ends of the group, on the corners farthest from the bank.
	(3) Any barge in a group, but projecting from it toward the channel shall be lighted as a single barge.
	(c) Barges moored in any slip or slough which is used primarily for mooring purposes are exempt from the lighting requirements of this section.
	(d) Barges moored in well-illuminated areas of the Illinois River north of Brandon Lock and Dam at Joliet, Ill are exempt from the lighting requirements of this section. These areas are as follows:
	Chicago Sanitary Ship Canal
	(1) Mile 293.2 to 293.9.
	(3) Mile 295.2 to 296.1
	(5) Mile 297.5 to 297.8
	(7) Mile 298 to 298.2
	(9) Mile 298.6 to 298.8
	(11) Mile 299.3 to 299.4
	(13) Mile 299.8 to 300.5
	(15) Mile 303 to 303.2
	(17) Mile 303.7 to 303.9
	(19) Mile 305.7 to 305.8
	(21) Mile 310.7 to 310.9
	(23) Mile 311 to 311.2
	(25) Mile 312.5 to 312.6

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(27) Mile 313.8 to 314.2
(29) Mile 314.6
(31) Mile 314.8 to 315.3
(33) Mile 315.7 to 316
(35) Mile 316.8
(37) Mile 316.85 to 317.05
(39) Mile 317.5
(41) Mile 318.4 to 318.9
(43) Mile 318.7 to 318.8
(45) Mile 320 to 320.3
(47) Mile 320.6
(49) Mile 322.3 to 322.4
(51) Mile 322.8
(53) Mile 322.9 to 327.2

Calument Sag Channel

(61) Mile 316.5

Little Calument River

(71) Mile 321.2
(73) Mile 322.3

Calumet River

(81) Mile 328.5 to 328.7
(83) Mile 329.2 to 329.4
(85) Mile 330, west bank to 330.2
(87) Mile 331.4 to 331.6
(89) Mile 332.2 to 332.4
(91) Mile 332.6 to 332.8

88.15 Lights on dredge pipelines

Dredge pipelines that are floating or supported on trestles shall display the following lights at night and in periods of restricted visibility.

(a) One row of yellow lights. The lights must be-

(1) Flashing 50 to 70 times per minute.

(2) Visible all around the horizon.

(3) Visible for at least 2 miles on a clear dark night.

(4) Not less than 2 and not more than 3.5 meters above the water.

(5) Approximately equally spaced and

(6) Not more than 10 meters apart where the pipeline crosses a navigable channel. Where the pipeline does not cross a navigable channel the lights must be sufficient in number to clearly show the pipeline's length and course.

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	(b) Two red lights at each end of the pipeline, including the ends in a channel where the pipeline is separated to allow vessels to pass (whether open or closed). The lights must be:
	(1) Visible all around the horizon, and
	(2) Visible for at least 2 miles on a clear dark night, and
	(3) One meter apart in a vertical line with the lower light at the same height above the water as the flashing yellow light.

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SPECIAL RULES

Distinctive Lights Authorized for Submarines

The Secretary of the Navy has authorized the display of a distinctive light by U. S. Naval submarines to be used when operating under either the International Rules or the Inland Rules ,Part 707 of Title 32, Code of Federal Regulations . This light is exhibited in addition to the normal navigation lights.

Submarines with normal navigation lights may easily be mistaken for small vessels. Since submarines are large deep draft vessels with limited maneuvering characteristics while they are on the surface, it is necessary to provide them with an additional unique identification light.

U.S. submarines may therefore display an intermittent flashing amber beacon with a sequence of operation of one flash per second for three (3) seconds followed by a three (3) second off-period. The light will be located where it can best be seen, as near as practicable, all around the horizon. It shall not be located less than (2) feet above or below the masthead lights.

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